

Go-SHIP A13.5 2020, the cruise that was not meant to be.

2nd and final cruise update

As we approach US waters, we realize how oddly time passes on a ship. It seems like it was ages ago that we conducted our last CTD, on the other hand, it's a little shocking to realize we're only a few hours away from being back on shore. For the geeks among us, and as a Doctor once said, time is a big ball of wibbly wobbly, timey wimey stuff.

Science-wise, our grand total stands at 8 CTD stations after Captain Simon decided to cancel the CTD casts we were planning to perform at crossover points with other GO-SHIP lines. In addition to the CTDs, we collected underway samples every two hours which concluded a day ago. We also have our usual suite of underway sensors, plus a $\delta^{13}\text{DIC}$ system from the Cai laboratory (University of Delaware) that was set up for underway measurements after the CTD stations. The most successful program on the cruise has been the BIO-GO-SHIP component. Due to berthing and Niskin water limitations on the Ron Brown, the work proposed by the Martiny (UC Irvine) lab consisted of surface underway sampling, so while the route has changed, it still provided a really interesting basin-wide route. Nathan Garcia has collected over 600 samples for particulate organic C:N:P, as well as 270 samples for genomic DNA analysis. Very nice! Stay tuned for our cruise report, which is so detailed that you will feel as if we did indeed accomplish all our GO-SHIP goals.

Since we were among the last research vessels still operating, we also maximized drifter and float deployment: 6 SOCCOM floats, 10 Argo floats and 35 drifters, that's almost 3 times more drifters than we had initially planned! Figure 1 shows the locations of all our deployments over a monthly averaged SST and SSS field.

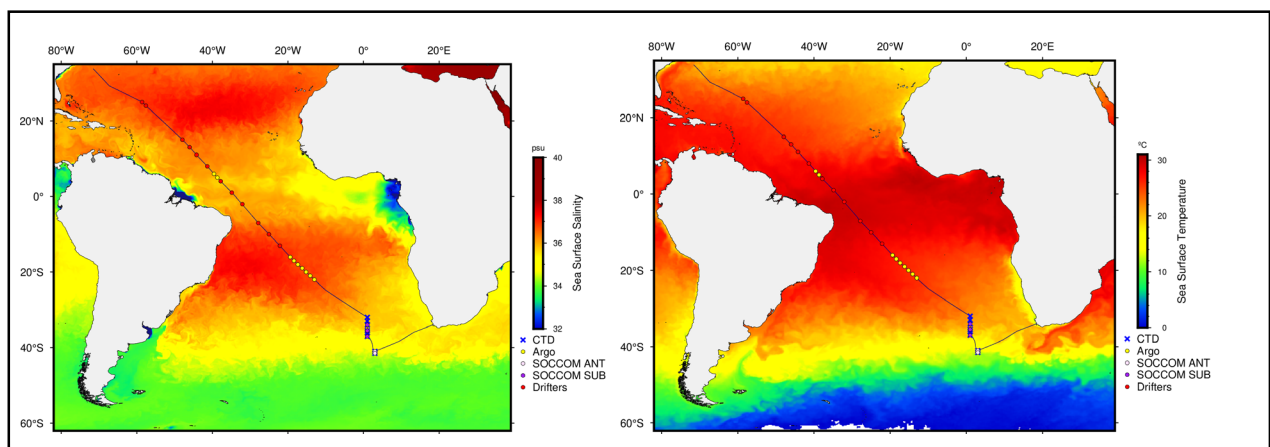


Figure 1. Deployment sites for SOCCOM, core Argo and drifters during the cruise over a monthly averaged field of SSS and SST. Plots by Joaquin Trinanes.

This cruise has certainly been unique and challenging, but we have been lucky in many other ways. For example, I bet most of you reading this from your weeks-long seclusion at home will appreciate the fact that we have been able to go to the gym (well...those who wanted to, anyway!), talk and have a

laugh with many different people without having to use zoom, and were unconcerned about running out of toilet paper, even if that toilet paper is thin as a kim-wype. We even had a picnic with BBQ (Figure 2).



Also pretty unusual is having had the opportunity to witness not one, but multiple green flashes. And we were lucky enough to have a talented amateur photographer on board who captured three green flashes on camera. See figure 3. The only modification is a zoom on the pictures, no filters applied! Zoom in some more for the green blink-and-you-missed-it flash!

Figure 2. Fun with polaroids on picnic day! Credit: Patrick Mears

We are now busy packing and organizing offloading of our equipment. We are all keeping an eye out on our different flight reservations as different flights get cancelled and re-booked. On that note, we wanted to end with a big THANK YOU for the great shore-side support we have received throughout the cruise. In particular, we want to thank NOAA's AOML, PMEL, NSSL, and UM's CIMAS who pooled resources to send us masks so we could all travel back home as safely as possible. Special thanks as well to Dr. Wei-Jun Cai who offered up his own personal stock of masks for all of us. We have been truly touched by your concern for our well-being.

Once we get home we can start working on ways to re-occupy A13.5 ASAP. We have done the dress rehearsal, now let's get to work on the real deal. We are ready!

Almost home,
The A13.5 team

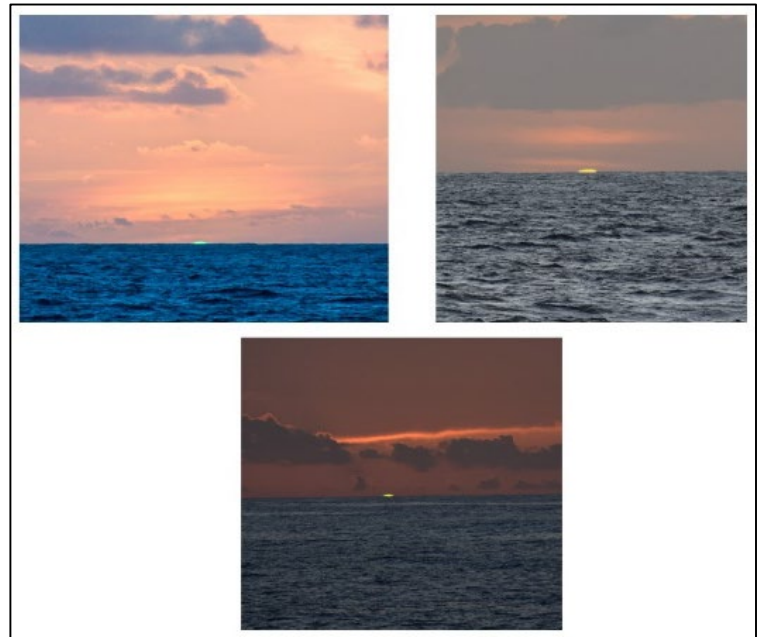


Figure 3: Green flash on three different nights. Credit: Molly Martin