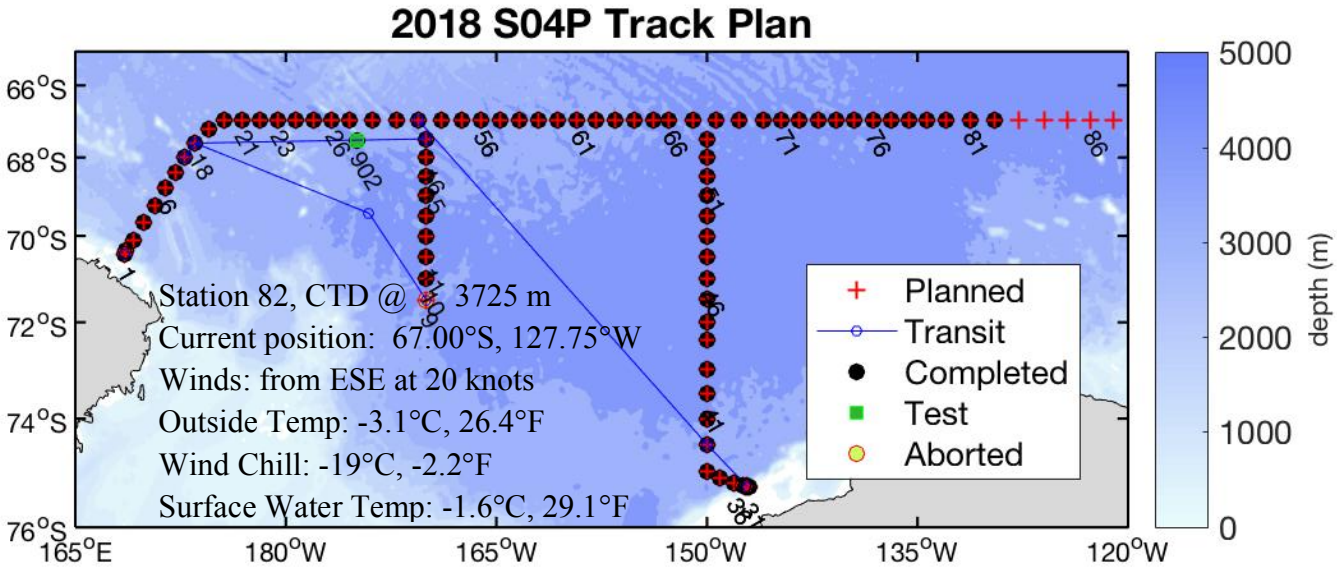
GO-SHIP 2018 S04P, NBP 18-02 **Sunday April 22, 2018**

Week 6 –Moving eastward along 67°S



Last week we left you having finished Station 66, and doing weather patterns (a ship's version of pacing) on the northwest side of the enormous B30 berg and its icy entourage. It took 3 full days before we were in a position to put the rosette in at Station 67 on the eastern side of the iceberg field. Over much of that three-day span we saw sustained 30-40 knot winds gusting to 50 knots with blizzard conditions in 20 ft seas. We have radar so we could see the icebergs around us, but the smaller (house-sized) chunks that were breaking off in the storm were more problematic. The bridge crew had to keep the coffee on and their eyes peeled, particularly at night when whiteout conditions were not uncommon. We were thankful for receiving numerous personalized weather updates from both stateside and McMurdo. We discussed and analyzed various ideas for changing our track to try to get out of the weather and get some work done, but in the end we decided that our best option was simply to wait it out. We did manage to deploy our last two Global Drifter Program drifters on the 16th (thank you Rachel and Jenny for braving the elements).

Looking out for ice in the dark.

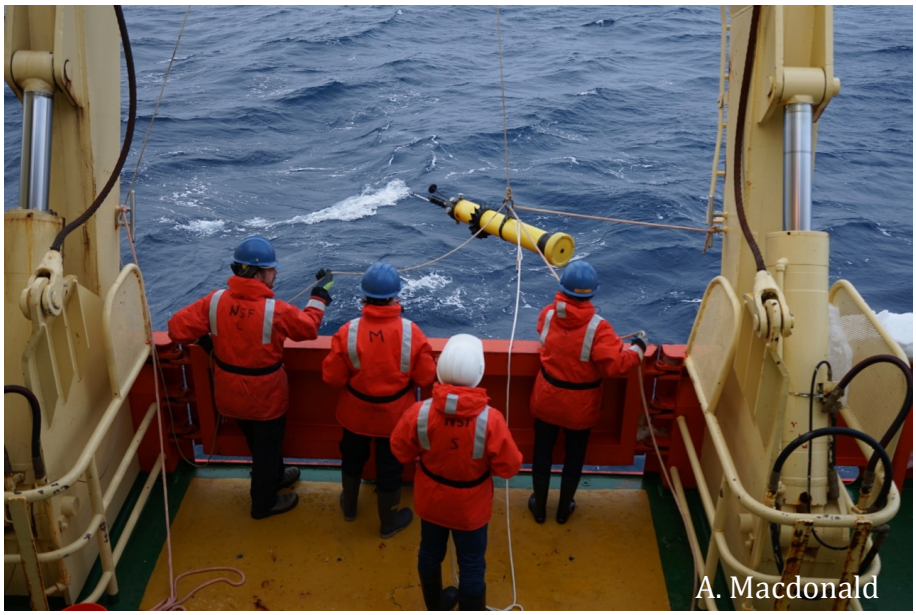
Even in daylight, it's not so easy. Where's the defroster?

When it's icy outside, there's nothing like deploying a couple of drifters to raise the spirits. We call it "doing science." (Photos: A. Macdonald)

The third weather day was frustrating because the winds had calmed a lot (down to sustained 25-30 knots, gusts to 40 knots - it's amazing how one perspective changes) but the seas were all over the place, with swell coming from multiple directions. Given all the issues we have had with the wire, we were not comfortable trying to put the rosette in under such conditions even with the promise of better weather to come. Finally on the 17th the winds came down to the 20-30 knot range and seas lay down. We waited a couple more hours just to be sure it would stay that way and then in it went – and since then we have been moving steadily along.

One of my jobs, with Ellen's much appreciated assistance, is to come up with a new station plan that takes that three-day weather delay into account. It is hard not to panic and make up the time immediately, but we wanted to keep our nominal 30 nm station spacing as we crossed in the eastern Ross Gyre where the Antarctic Circumpolar Current dips southward. We adjusted to longer spacing once we were out of this region. We are now beyond our half way mark in stations, transits and distance across the basin. Although, we have had to replace our pumps more than once, the vast majority of observations we have collected are up to standard. A number of us are looking at the data in comparison to previous occupations and determining that the story is not as simple as *warming* and *freshening* or even the opposite.

R. Lekanoff


A. Macdonald

(right) The Southern Ocean Spy SOCCOM float before deployment – decorated by C. Cadot and R. Lekanoff . (above) Our first EM-APEX float deployment.

Yesterday, we deployed our two APL EM-APEX floats off the starboard A-Frame (above right) and our sixth and final SOCCOM float, the Southern Ocean Spy adopted and named by the New Hanover Township School (see above left).

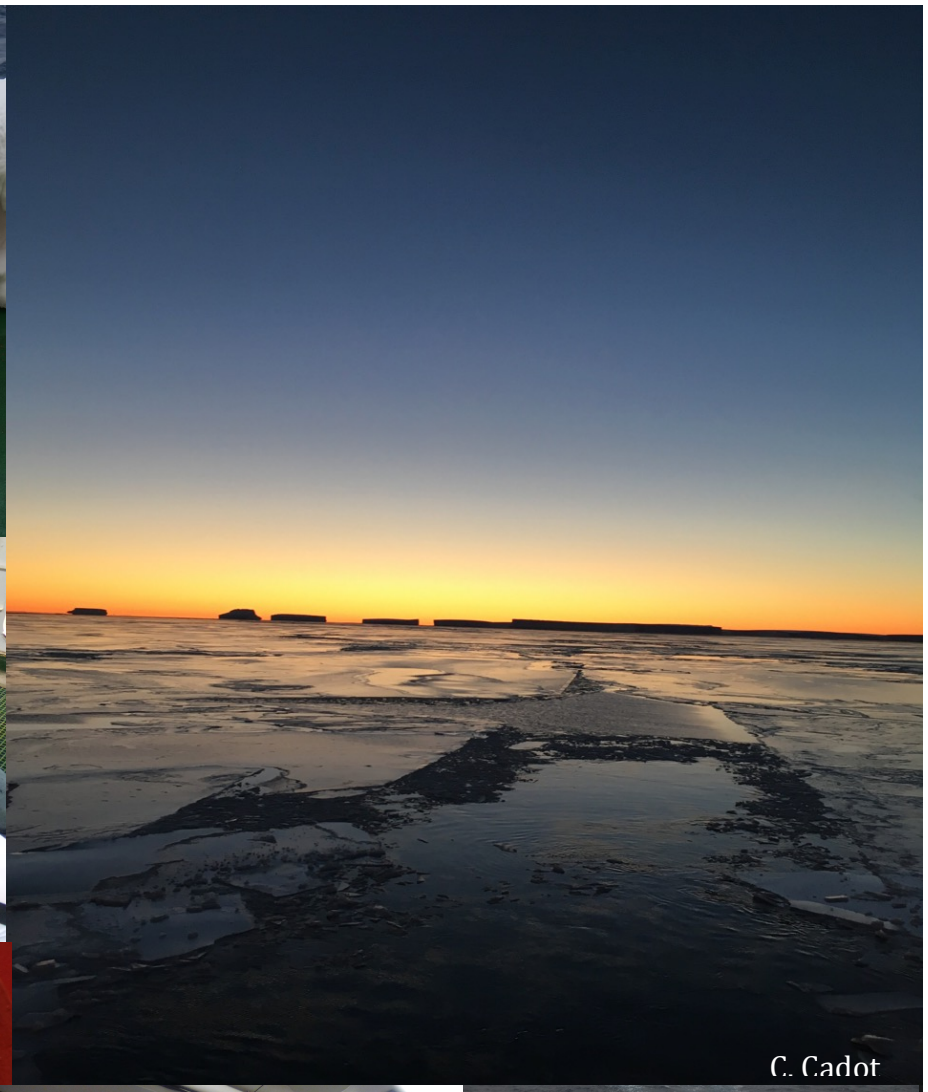
We are now at day 46 and less than three weeks from the end of science. We still had edible lettuce yesterday and like our salad, we are perhaps a little frayed at the edges, but doing well. Frustrating as the delay was, it did allow some time for looking at data and getting through a few rounds of the cribbage tournament. Our group seems to have no trouble coming up with things to fill our time. The Murder game that was begun at the beginning of the cruise is still going strong. Though nobody seems to know for sure who is alive and who is not. We have a Fuss Ball tournament and Chess tournament, and there's always drills and Taco Tuesday to look forward to. This resilience is good because we have another storm heading our way with the promise of sustained winds to 35 knots and gusts to 50 knots before midnight tomorrow.

And so is goes in the Southern Ocean.
Until next time,
Best regards,

Alison Macdonald (Chief Scientist) and Ellen Briggs (Co-chief Scientist)


A. Macdonald


R. Dittrich


C. Cadot


R. Dittrich


R. Dittrich


K.Vicknair