

Brown-0114 (14 Jan 2020)

Trish Quinn (Chief Scientist)

1. Objective

We deployed 6 SWIFTS along a transect perpendicular to the wind approximately 5 nm apart. After deployment of each SWIFT we sat nearby for a ship – SWIFT comparison. Deployed the last SWIFT at 6:30 local. Locations of the SWIFTS can be seen in the sail drone portal. Radiosonde launches continued every 4 hours.

During the day our objective was to further compare the fluxes measured near the ocean surface by the SWIFTS to the 17 m fluxes measured from the ship and to swap out the wind sensor on SWIFT 2. We recovered SWIFT 2 and swapped wind sensors, then sat nearby for 2 hours. Then we transited to SWIFT 1 and sat nearby for 2 hours. Tonight we will recover SWIFT 2 (again) and SWIFT 3 to replace wind sensors.

We plan to be back at NTAS by 07:00 local tomorrow for the final comparison with the old buoy.

2. Synoptic Situation

Not pleasant. Winds up to 30 kts. Sea state of 8 - 10.

Field	Quantity	Notes
RH	(74.5, 4.5)	18 m asl
Tair	(25.8, 0.33)	18 m asl
Wind	(11, 2.0 m/s)	18 m asl
SST	(26.3, 0.13)	5 m bsl
Salinity	(35.8, 0.38)	5 m bsl
Precipitable water		
CN	(200, 40)	18 m asl
CCN	(60, 40@0.3%)	18 m asl
Dust	No indication	
Trade Inversion		
Cloud Obs (low/mid/high)	08:00 Local	Cu, St, Sc/Ac/Cc
Coverage (low/mid/high)	2/8, 1/8, 1/8	
Cloud Obs (low/mid/high)	12:00 Local	Cu, Sc/Ac/na
Coverage (low/mid/high)	4/8, 1/8, 0/8	
Cloud Obs (low/mid/high)	16:00 Local	Cu, St/Ac/na
Coverage (low/mid/high)	3/8, 1/8, 0/8	

3. Cruise-day Elements

Element	Position [°N, °W]	Time [UTC]	Notes
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4. Instrument Status

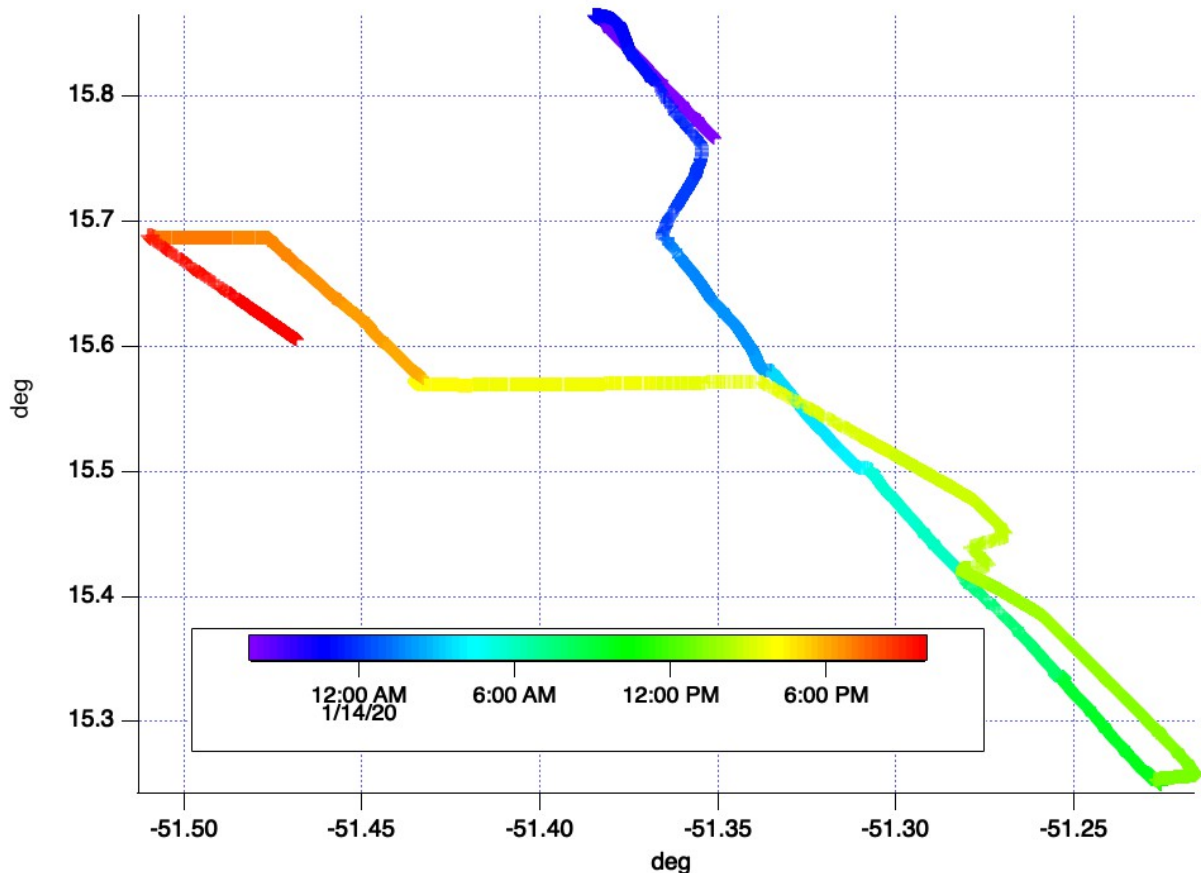
Cloud radar, microwave radiometer, and Picarro isotope instrument are not operational and haven't been since the beginning of the cruise.

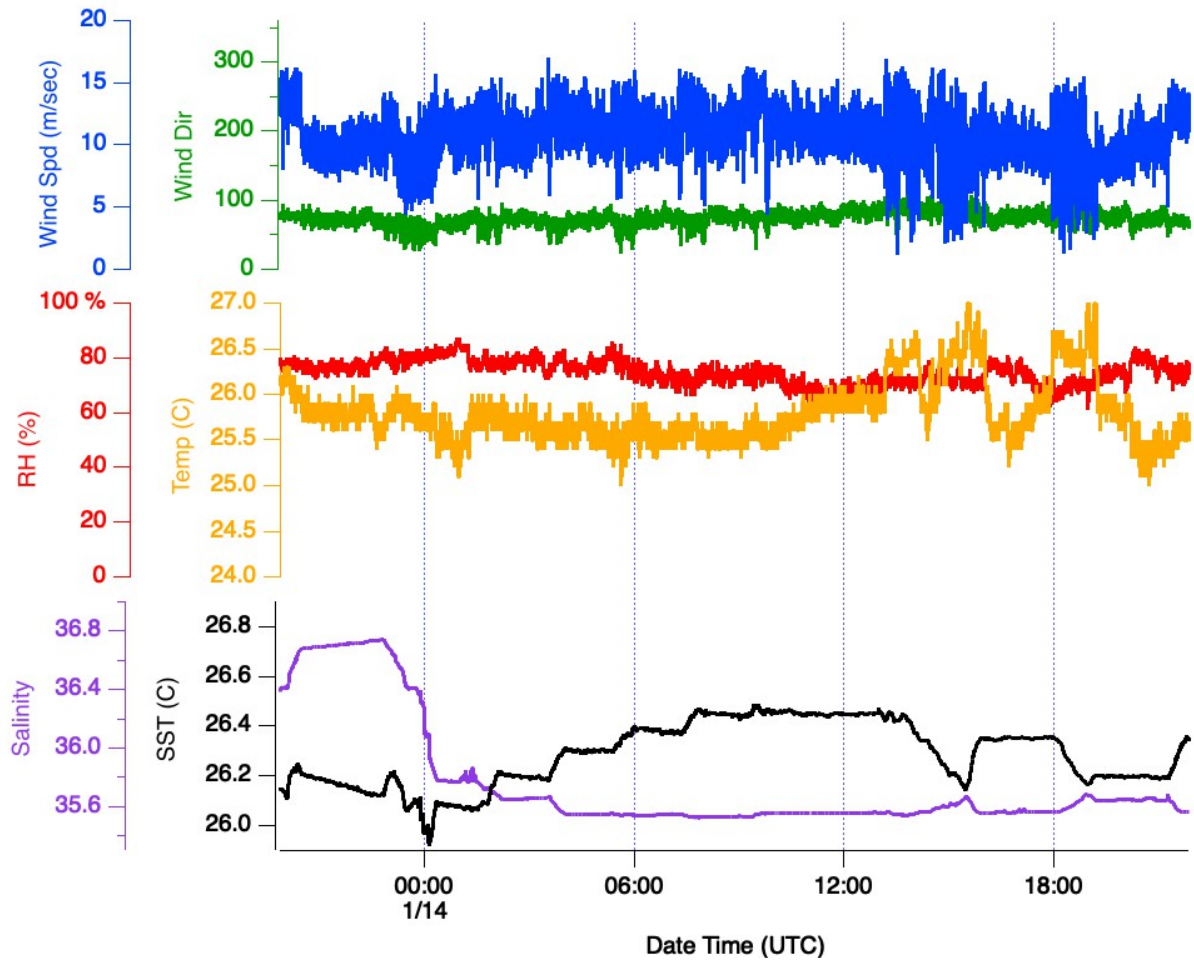
5. Outlook

We intend to be at NTAS by 07:00 local tomorrow morning. We will sit there for 24 hours comparing atmospheric and seawater measurements. Four CTD shallow casts are planned. On Thursday, weather permitting, we will recover the old buoy.

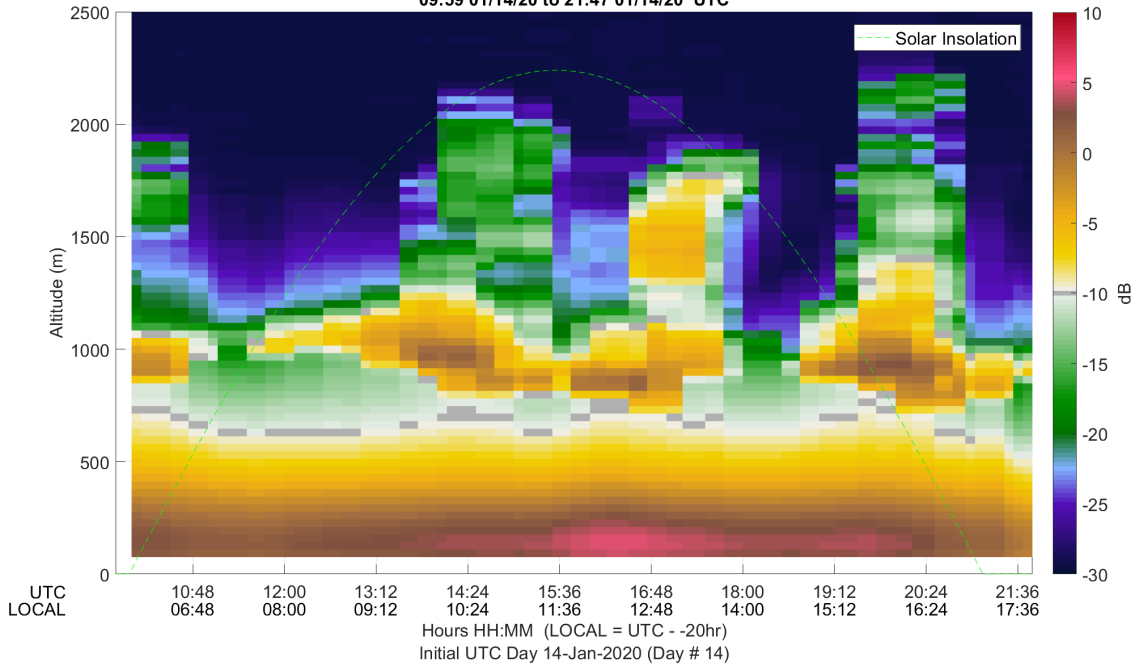
6. Figures

Today's track:





MicroDop02 ATOMIC R/V Brown - Aerosol Backscatter Signal Strength Profiles
09:59 01/14/20 to 21:47 01/14/20 UTC



MicroDop02 ATOMIC R/V Brown - Vertical Velocity Variance Profiles
09:59 01/14/20 to 21:47 01/14/20 UTC

