

Brown-0112 (12 Jan 2020)

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1. Objective

Left the MOVE site around 5:30 UTC and transited SE 50 nm to the new NTAS buoy. Spent the day comparing ship and buoy instruments, continuing atmospheric sampling, and radiosonde launches every 4 hours. Conducted 3 shallow CTD casts (250 m) for comparison to below surface buoy measurements. No coordination with other platforms.

2. Synoptic Situation

Fair weather with winds around 25 kts, a sea state of 6 to 8', and occasional rain. Partly cloudy.

Field	Quantity	Notes
RH	(77.5, 3.8)	18 m asl
Tair	(25.5, 0.48)	18 m asl
Wind	(12, 1.9 m/s)	18 m asl
SST	(26.6, 0.28)	5 m bsl
Salinity	(35.4, 0.34)	5 m bsl
Precipitable water		
CN	(252, 21)	18 m asl
CCN	(150, 25)	18 m asl
Dust	No indication	
Trade Inversion		
Cloud Obs (low/mid/high)	08:00	Local Cu, St/Ac, As/na
Coverage (low/mid/high)	2/8, 1/8, 0/8	
Cloud Obs (low/mid/high)	12:00	Local Cu, St/Ac/na
Coverage (low/mid/high)	4/8, 2/8, 0/8	
Cloud Obs (low/mid/high)	16:00	Local Cu/Ac/na
Coverage (low/mid/high)	3/8, 1/8, 0/8	

3. Cruise-day Elements

Element	Position [°N, °W]	Time [UTC]	Notes
CTD Cast 1	14.74N, 51W	13:00	
CTD Cast 2	14.74N, 51W	17:00	
CTD Cast 3	14.74N, 51W	21:00	

CTD Station: Three shallow casts to 250 m. Same temperature inversion below the mixed layer as observed in the two previous casts but it is shallower. Shoaling has occurred to the east.

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 plan to stay in the NTAS buoy region for comparisons between the new and old buoys and the ship through mid-week while continuing atmospheric measurements and radiosondes every 4 hours. Four shallow casts (250 m) are planned for tomorrow with seawater collection for isotopic analysis. When the seas become calm enough (Tues, Wed, or Thurs), we will recover the old NTAS buoy. In the meantime, we are considering best locations for deploying the SWIFTS and may deploy while waiting the weather to calm down for the buoy retrieval.

6. Figures



