

# Brown-0119 (19 January 2020)

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## 1. Objective

Spent the day at 14°21'44" N and 53°W. Continuous atmospheric sampling with bow into the wind. Radiosondes every 4 hours. Conducting hand held CTDs every few hours. Frequency has decreased due to a broken display on the winch and diurnal stability of the mixed layer.

## 2. Synoptic Situation

Winds decreased over the course of the day from 17 to 14 kts. Cloudy in the morning with clearing in the afternoon. Big swell from the NE making for a lot of motion even though we are stationary. White caps with a sea state of 5 to 7. Sargassum observed.

Field	Quantity	Notes
RH	79.7, 3.9	18 m asl
Tair	25.7, 0.26	18 m asl
Wind	8.5, 1.5 m/s	18 m asl
SST	26.8, 0.04	5 m bsl
Salinity	35.3, 0.003	5 m bsl
Precipitable water		
CN	150, 25	18 m asl
CCN	125, 20 @ 0.3%	
Dust	No indicator	
Trade Inversion		

### Cloud Observations: 01/19/20

Local Time (UTC -4)	Ship's Position	Coverage	Types	Codes	Remarks
0800	14°20'N 053°00'W	0/8 High	n/a		
		1/8 Mid	Ac	C <sub>M</sub> 7	
		2/8 Low	Cu	C <sub>L</sub> 1	
1200	14°20'N 053°00'W	0/8 High	n/a		
		1/8 Mid	Ac	C <sub>M</sub> 7	
		3/8 Low	Cu, Sc	C <sub>L</sub> 1, C <sub>L</sub> 4	
1600	14°20'N 053°00'W	0/8 High	n/a		
		2/8 Mid	As	C <sub>M</sub> 6	
		/8 Low	Cu, St	C <sub>L</sub> 1, C <sub>L</sub> 2, C <sub>L</sub> 5	

### 3. Cruise-day Elements

Element	Position [°N, °W]	Time [UTC]	Notes
CTD Casts	14° 21' 44', 53°	Every few hours	Handheld to 100 m

CTD Stations: Handheld casts every few hours to 100 m.

### 4. Instrument Status

Cloud radar, microwave radiometer, and Picarro isotope instrument are not operational.

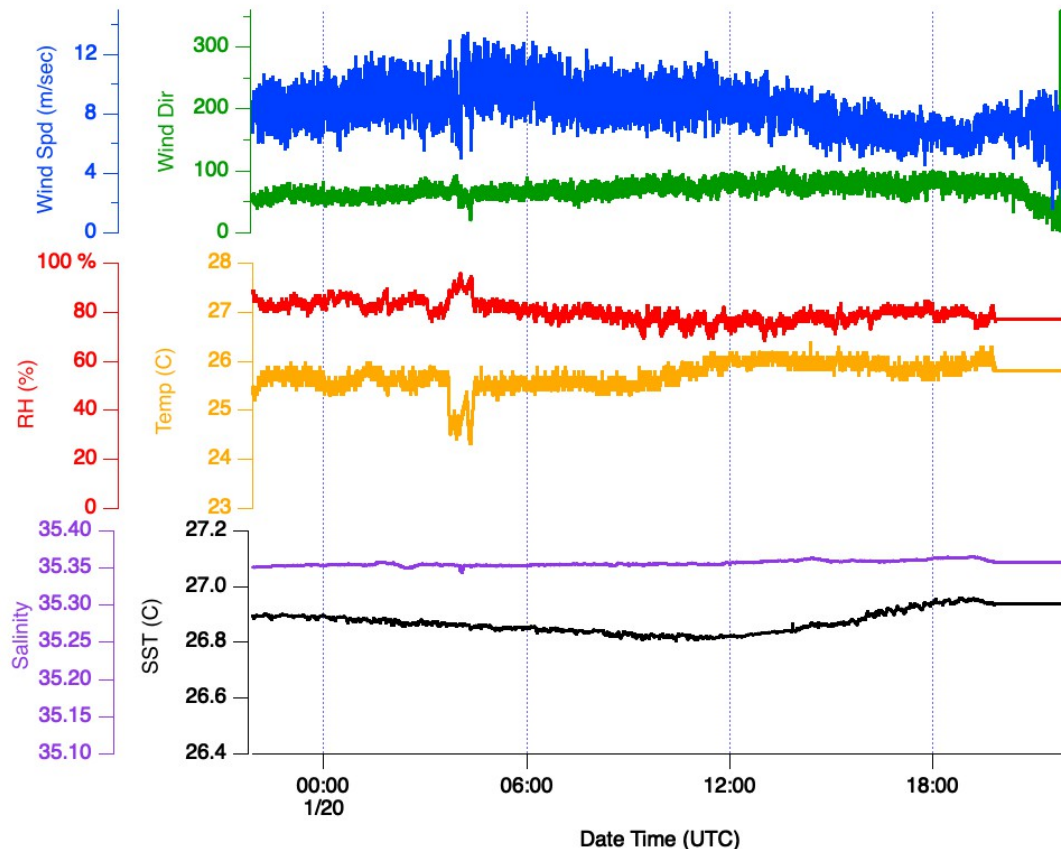
### 5. Outlook

We will stay at this station (14°21'44"N and 53°W) until Wednesday Jan. 22<sup>nd</sup> allowing for three full diurnal cycles of atmospheric sampling, every four hour radiosonde launches, and every few hour handheld CTD casts. On Jan. 22<sup>nd</sup> we will pick up the 6 SWIFTS before heading to Bridgetown. We plan to sit 20 nm upwind of BCO on Jan 24 and 25.

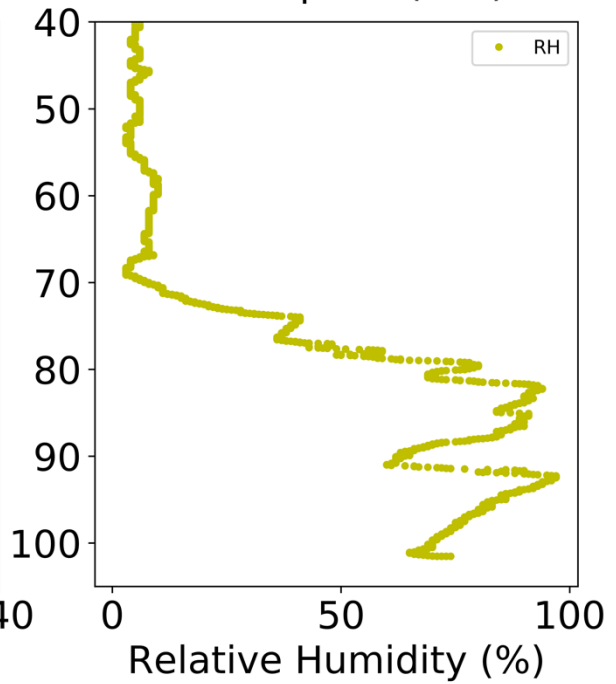
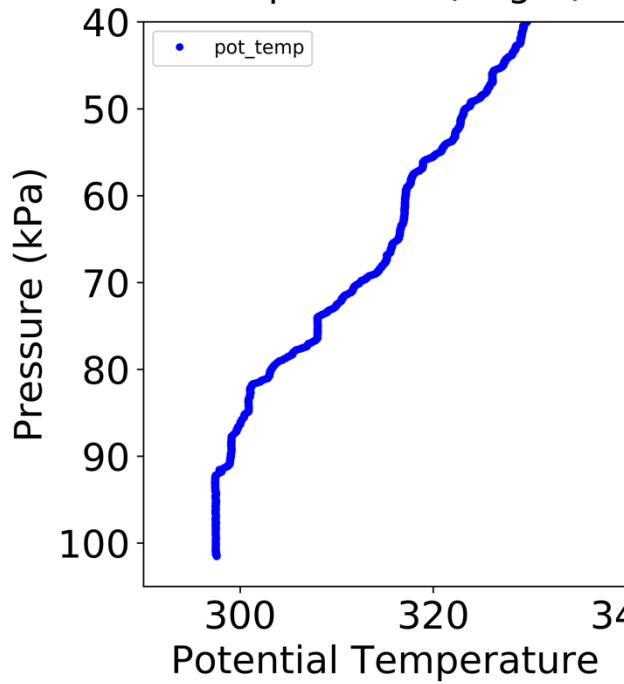
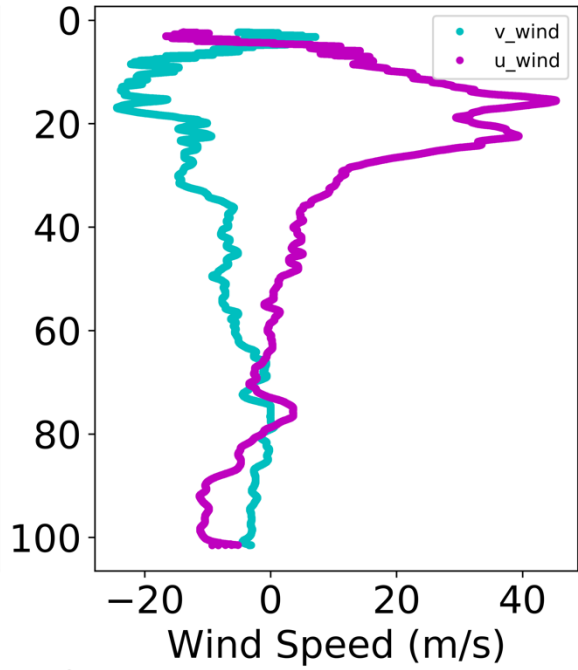
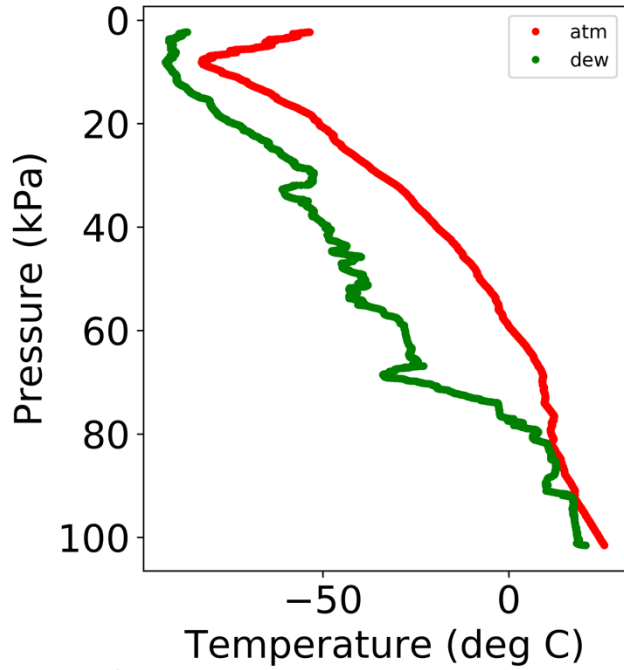
### 6. Figures

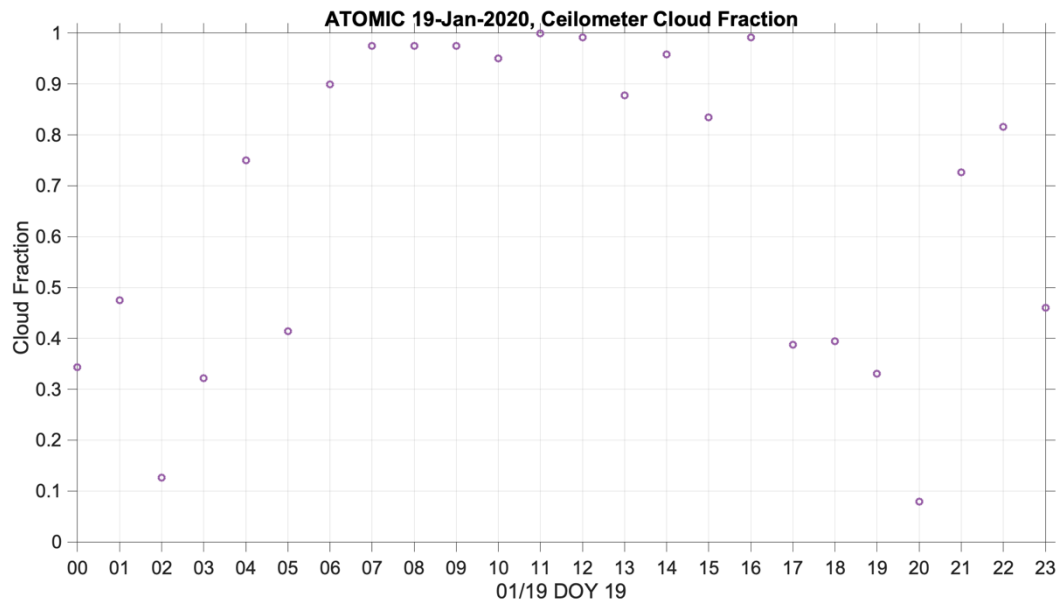
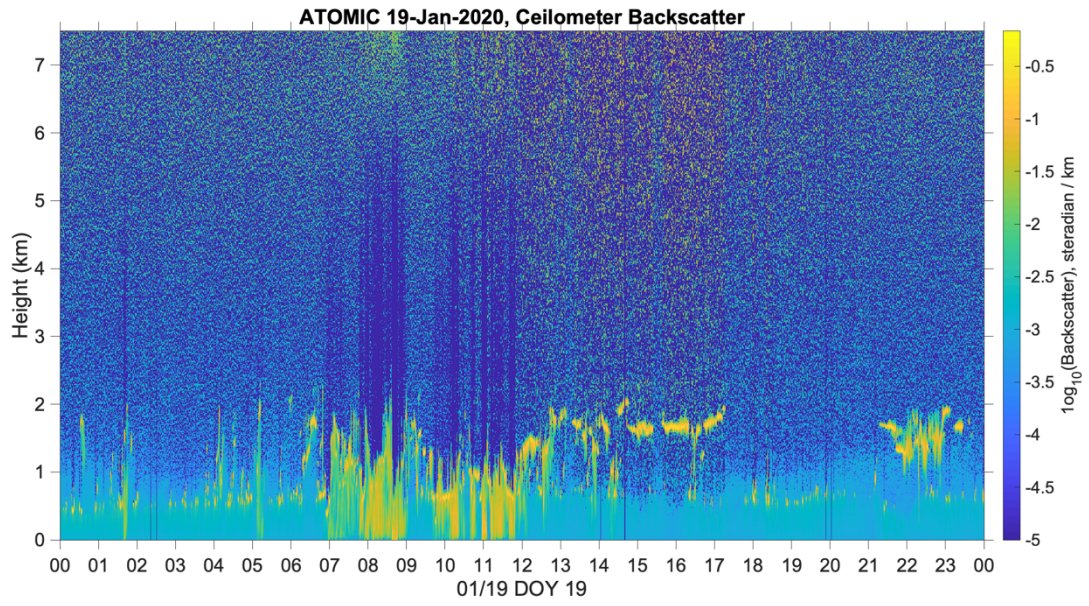
Today's track:

Stationary at 14°21'44"N and 53°W.



2020-01-20 1043UTC





ATOMIC 19-Jan-2020, Cloudbase Ht, Median  $\pm$  84/16th percentiles

