

Brown-0125 (25 January 2020)

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Compiled: 01.25 18:30 AST

1. Objective

We have sampled at our station 20 nm upwind of BCO (13.15N, 59.083W) since 14:20 local yesterday. We have had several ships cross upwind based on sharp spikes in CN and absorption and titration of ozone. We have continued to see sporadic simultaneous increases in particle number concentration and ozone indicating entrainment from the upper atmosphere. Radiosonde operations were suspended at 56W knowing that the Meteor was launching balloons in the region. UCTDs were conducted every few hours at this station to assess diurnal variations in the mixed layer. We will leave this station at midnight and head to Bridgetown for our inport.

2. Synoptic Situation

Winds have decreased from 14 to 8 kts over the past 24 hours. Calm seas with a sea state of 3 to 5. Sargassum observed.

Field	Quantity	Notes
RH	71, 3.05	18 m asl
Tair	26.1, 0.69	18 m asl
Wind	4.9, 1.3 m/s	18 m asl
SST	27.4, 0.16	5 m bsl
Salinity	35.8, 0.02	5 m bsl
Precipitable water		
CN	200, 50	
CCN	110, 20 @ 0.3%	
Dust	No indicator	
Trade Inversion		

Cloud Observations: 01/25/20

Local Time (UTC -4)	Ship's Position	Coverage	Types	Codes	Remarks
0800	13°08'N 059°04'W	0/8 High	n/a		
		6/8 Mid	As	C _M 1	
		3/8 Low	Cu, Sc	C _L 1, C _L 4	
1200	13°08'N 059°04'W	0/8 High	n/a		
		4/8 Mid	As	C _M 1	
		3/8 Low	Cu, Sc	C _L 1, C _L 4	
1600	13°08'N 059°04'W	0/8 High	n/a		
		1/8 Mid	As	C _M 1	
		4/8 Low	Cu, Sc	C _L 1, C _L 4	

3. Cruise-day Elements

Element	Position [°N, °W]	Time [UTC]	Notes
UCTDs	13.5, 59.083	Every few hrs	To 100 m

4. Instrument Status

Cloud radar, microwave radiometer, and Picarro isotope instrument are not operational. There will be an attempt to repair the cloud radar during the inport. The isotope instrument is being swapped out for a working one. The microwave radiometer will not be onboard for Leg 2.

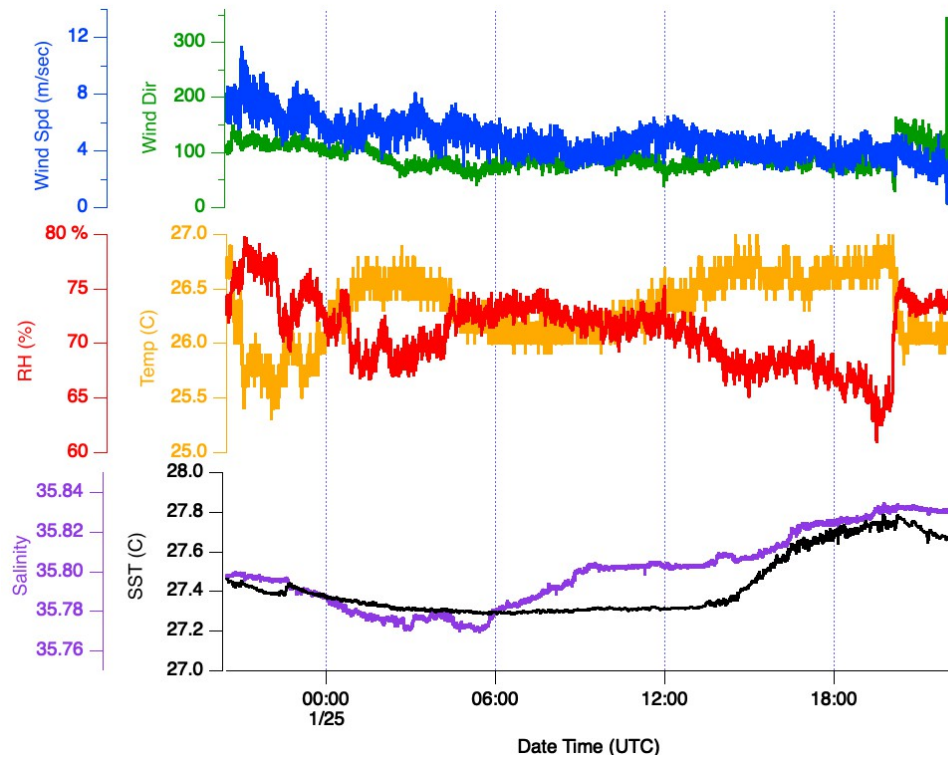
5. Outlook

Heading to Bridgetown at local midnight. Leaving Bridgetown for Leg 2 at 16:00 local on Tuesday, Jan. 28.

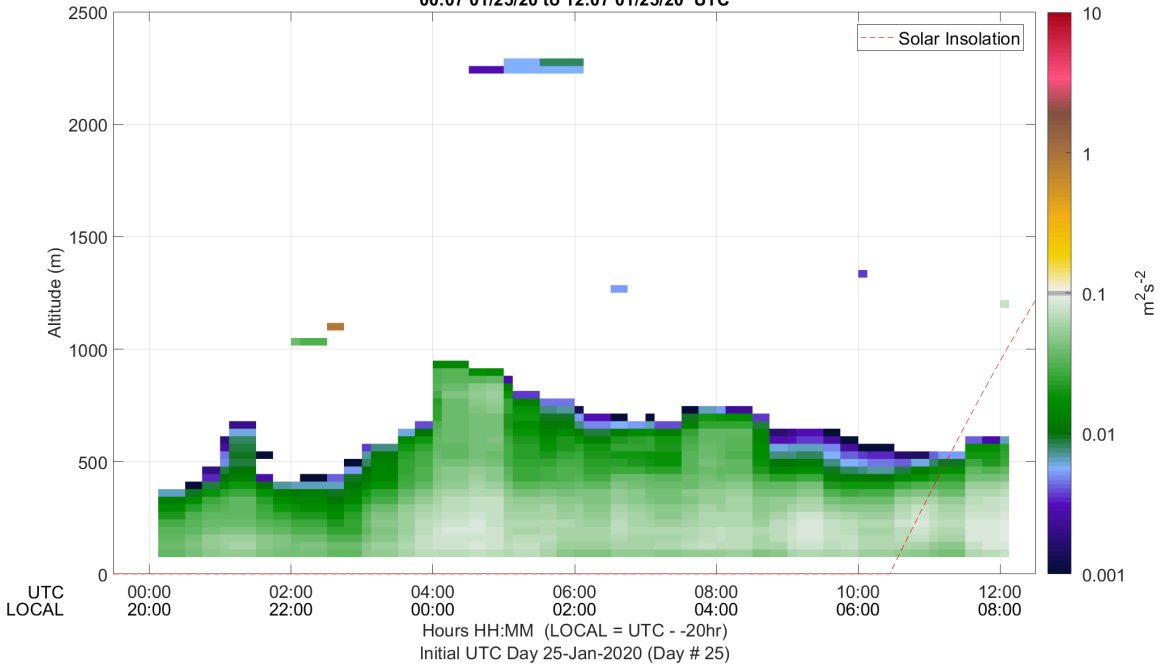
6. Figures

Today's track:

Stationary at 13.15N, 59.083W.



MicroDop02 ATOMIC R/V Brown- Vertical Velocity Variance Profiles
00:07 01/25/20 to 12:07 01/25/20 UTC



MicroDop02 ATOMIC R/V Brown- Vertical Velocity Variance Profiles
12:07 01/25/20 to 21:52 01/25/20 UTC

