Brown-0108 (8 January 2020)

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1. Objective

Brown continues to head to the NTAS buoy. Radiosondes were started last night at 02:45 and have continued every 4 hours. A deep sea cast was conducted to test the NTAS releases. No coordination with other platforms on this day.

2. Synoptic Situation

Weather was partly cloudy with shallow cumulus with a solid cloud bank on the horizon. Waves of 8' with white caps. Sargassum was present although not as much as yesterday. Dust aerosol from Africa was encountered around 04:00 UTC with concentrations increasing until about 12:00, thereafter holding steady with a sub-10 micron scattering coefficient of 100 1/Mm. Radon (tracer of continental air) increased with the increasing scattering coefficient.

3. Cruise-day Elements

Underway to the NTAS buoy with a radiosonde planned for 02:45 UTC on 0108.

Element	Position [ºN, ºW]	Time [UTC]	Notes
CTD-1	13.612, 56.458	12:40	Cast to 2000 m

Inter-calibration: None

CTD Stations: One cast to 2000 m to test NTAS acoustic releases. Mixed layer with lower salinity of 100 m. Temperature inversion below.

Overflights: None

4. Instrument Status

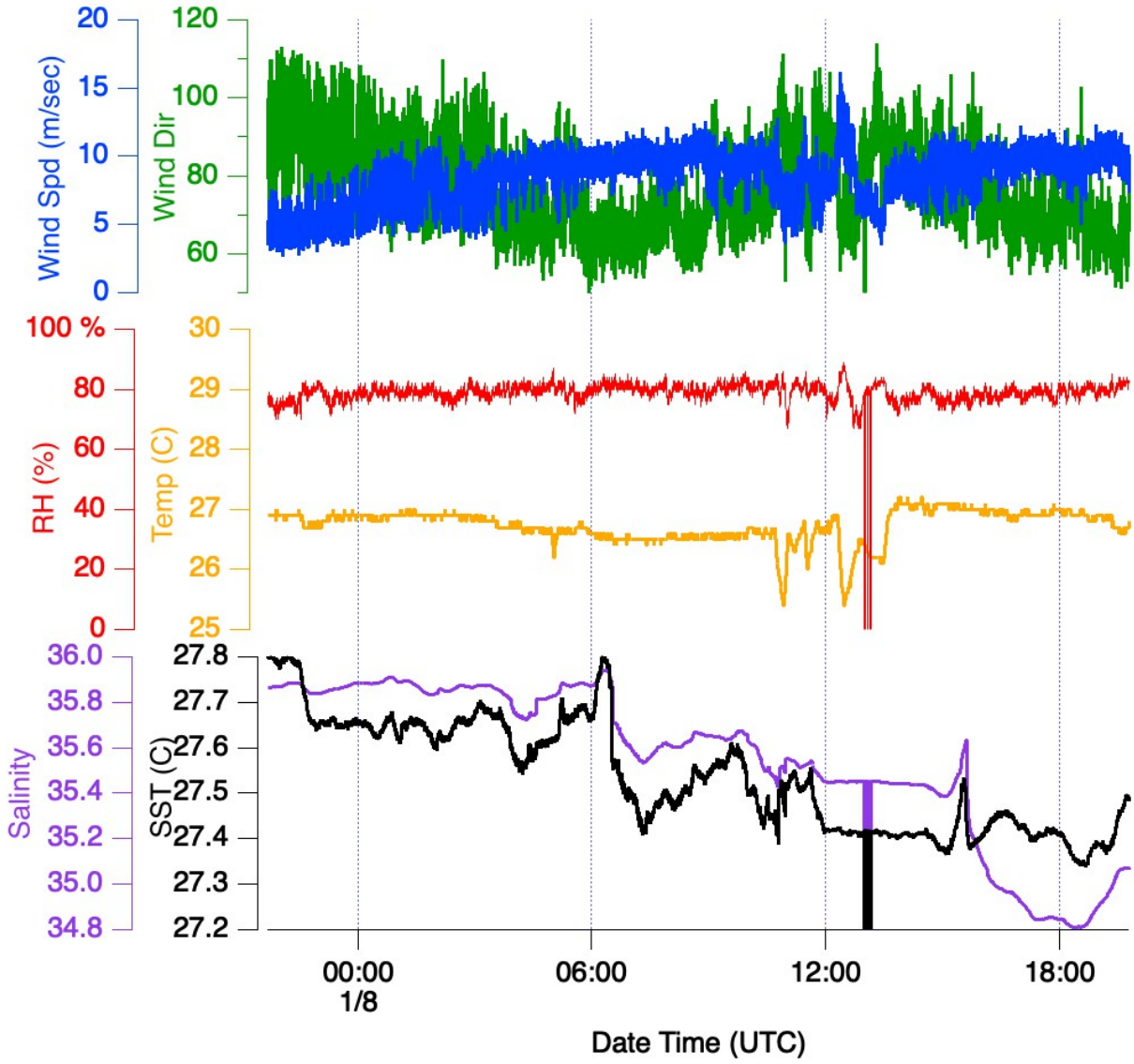
All instruments are operational.

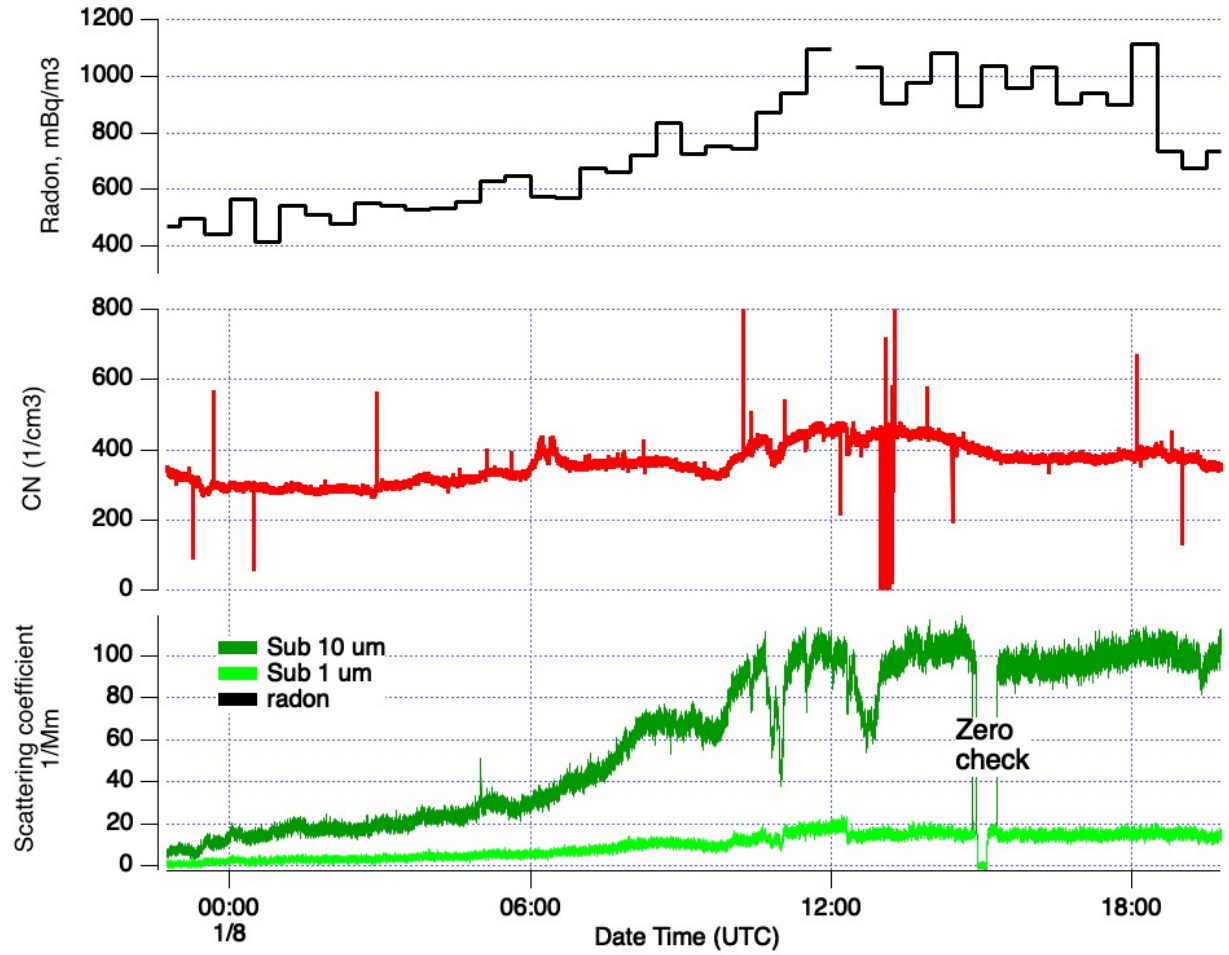
5. Outlook

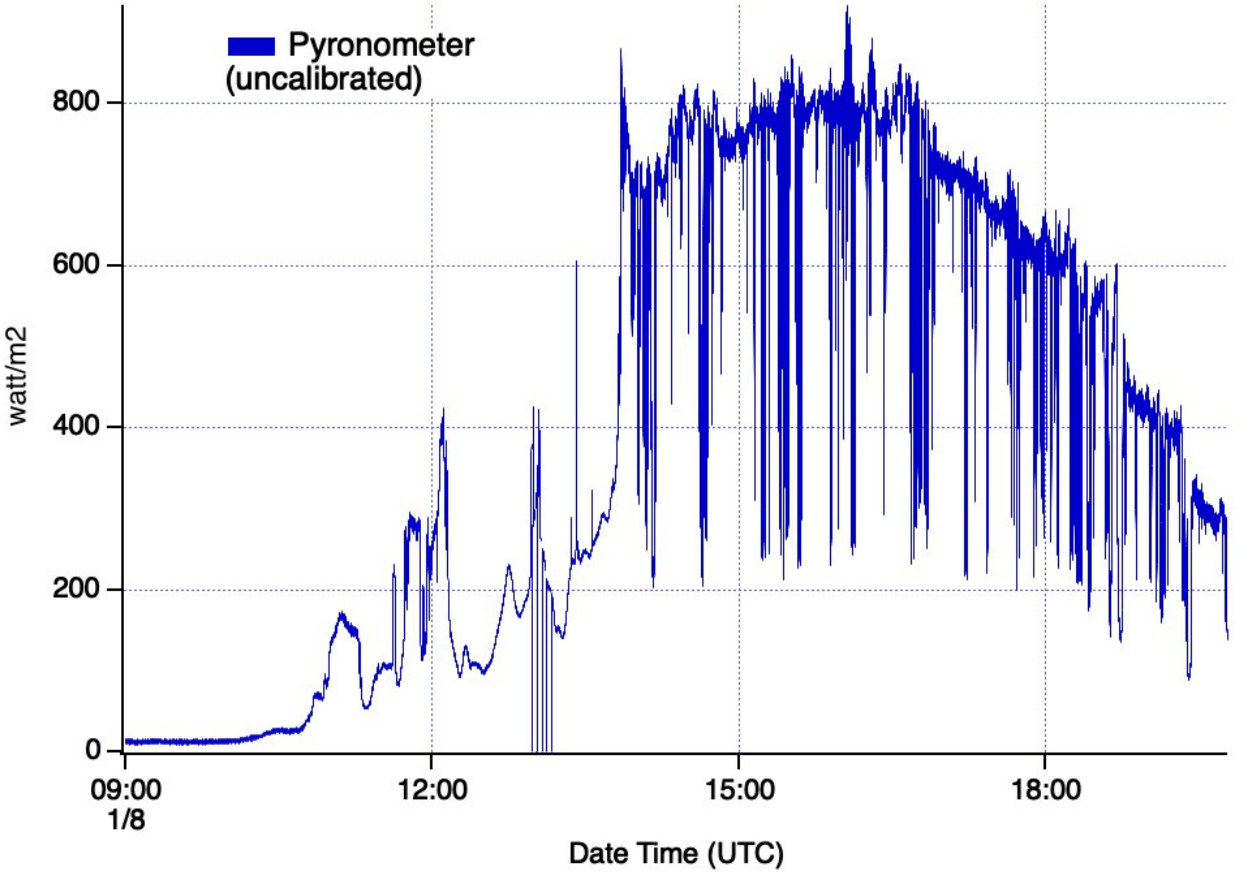
Over the next two days we will be transiting to the NTAS buoy. Along with balloon launches we will be making in situ and remote atmospheric measurements (aerosols, clouds, etc.). We will deploy an ARGO float today at 14N and 55W. We are planning on deploying the wave gliders tomorrow. We anticipate beginning NTAS buoy operations on 0110.

6. Figures

See following pages


Wind Spd (m/sec)
20
15
10
5
0
Wind Dir
120
100
80
60
RH (%)
100 %
80
60
40
20
0
Temp (C)
30
29
28
27
26
25
Salinity
36.0
35.8
35.6
35.4
35.2
35.0
34.8
SST (C)
27.8
27.7
27.6
27.5
27.4
27.3
27.2
00:00
1/8
06:00
12:00
18:00
Date Time (UTC)


Radon, mBq/m3
1200
1000
800
600
400
CN (1/cm3)
800
600
400
200
0
Scattering coefficient 1/Mm
100
80
60
40
20
0
Sub 10 um
Sub 1 um
radon
Zero check
00:00
1/8
06:00
12:00
18:00
Date Time (UTC)


Pyronometer (uncalibrated)
watt/m2
800
600
400
200
0
09:00
1/8
12:00
15:00
18:00
Date Time (UTC)