

# Brown-0122 (22 January 2020)

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Compiled: 01.22 20:15 AST

## 1. Objective

Left our station at 14°21'44" N and 53°W at 3:30 local to recover SWIFTS. All six were recovered on an ENE line between 14.89N, 53.27W and 15.06N, 52W. A UCTD was conducted at each SWIFT recovery site. Continuous atmospheric sampling with bow into the wind during the recoveries. At 16:25 local we turned to head southwest to 14.383N and 55W to be in the center of the P3 dropsonde circle at 11:40 local tomorrow. We will likely arrive several hours earlier than 11:40 and sit into the wind for atmospheric sampling. Radiosondes every 4 hours.

## 2. Synoptic Situation

Winds between 14 and 22 kts, until 8:00 am local and then decreasing to 10 kts. Lessening of white caps throughout the day. Sea state of 4 to 6. Partly cloudy. Sargassum observed.

Field	Quantity	Notes
RH	71.6, 4.2	18 m asl
Tair	25.3, 0.25	18 m asl
Wind	7.5, 1.6 m/s	18 m asl
SST	26.6, 0.23	5 m bsl
Salinity	35.4, 0.08	5 m bsl
Precipitable water		
CN	190, 25	
CCN	150, 10 @ 0.3%	
Dust	No indicator	
Trade Inversion		

Cloud Observations: 01/22/20

Local Time (UTC -4)	Ship's Position	Coverage	Types	Codes	Remarks
0800	14°39'N 052°56'W	0/8 High	n/a		
		0/8 Mid	n/a		
		2/8 Low	Cu, Sc	C <sub>c</sub> 1, C <sub>c</sub> 2	
1200	14°56'N 052°41'W	0/8 High	n/a		
		0/8 Mid	n/a		
		1/8 Low	Cu	C <sub>c</sub> 1	
1600	15°03'N 052°02'W	0/8 High	n/a		
		1/8 Mid	As	C <sub>M</sub> 1	
		1/8 Low	Cu, St	C <sub>c</sub> 1	

### 3. Cruise-day Elements

Element	Position [°N, °W]	Time [UTC]	Notes
UCTD Cast	14.89, 53.27	15:20	Handheld to 100 m
UCTD Cast	14.89, 52.83	17:00	Handheld to 100 m
UCTD Cast	15.01, 52.64	18:45	Handheld to 100 m
UCTD Cast	14.97, 52.53	20:00	Handheld to 100 m
UCTD Cast	15.03, 52.32W	18:50	Handheld to 100 m
UCTD Cast	15.06, 52W	19:45	Handheld to 100 m

### 4. Instrument Status

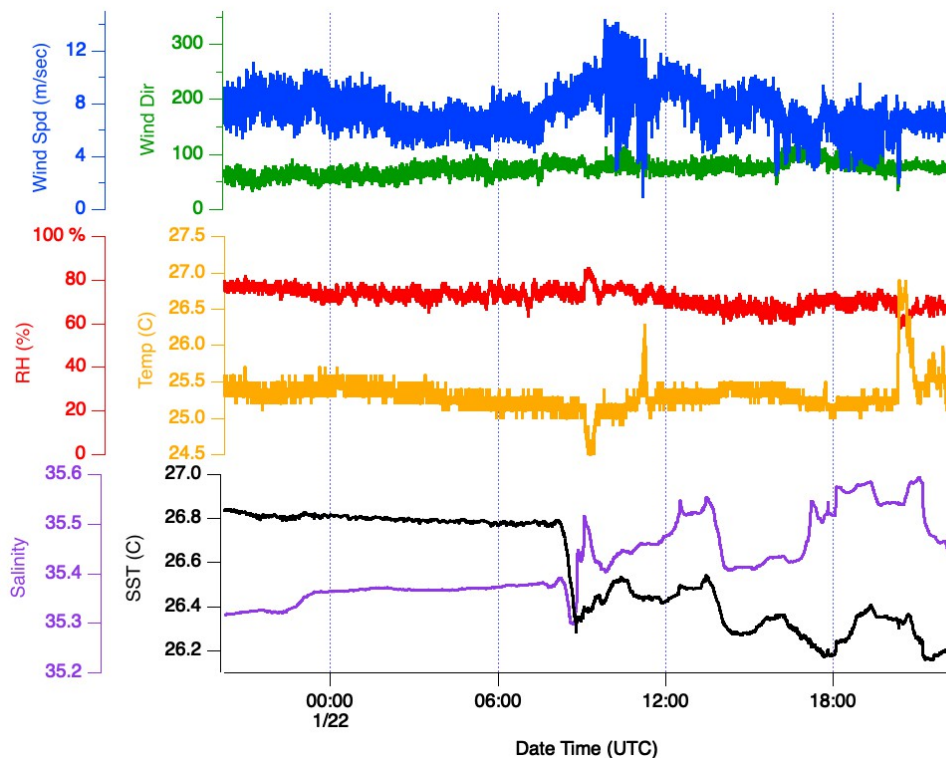
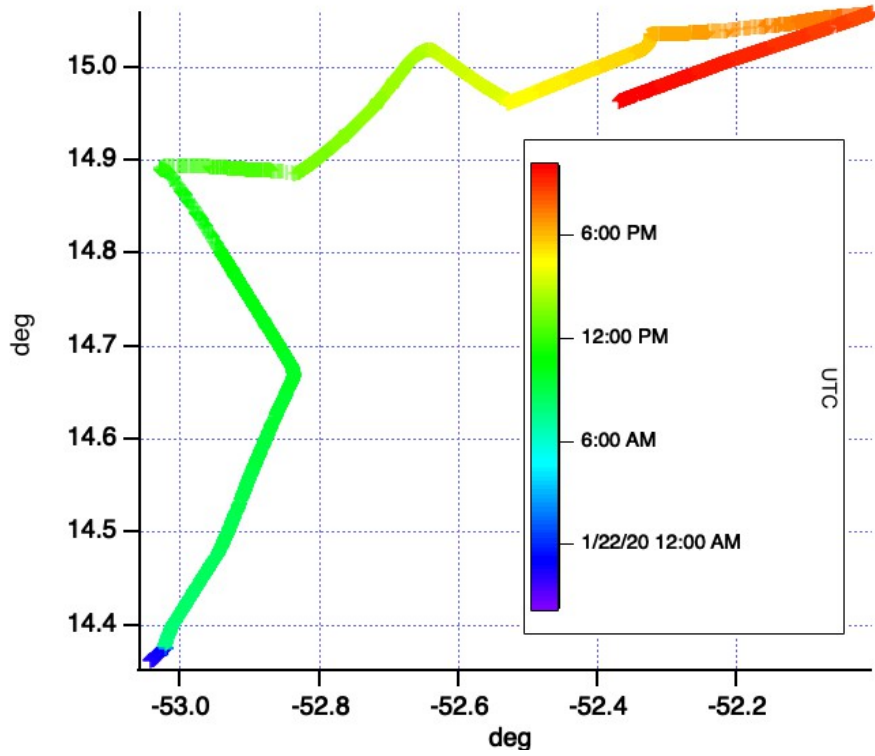
Cloud radar, microwave radiometer, and Picarro isotope instrument are not operational.

### 5. Outlook

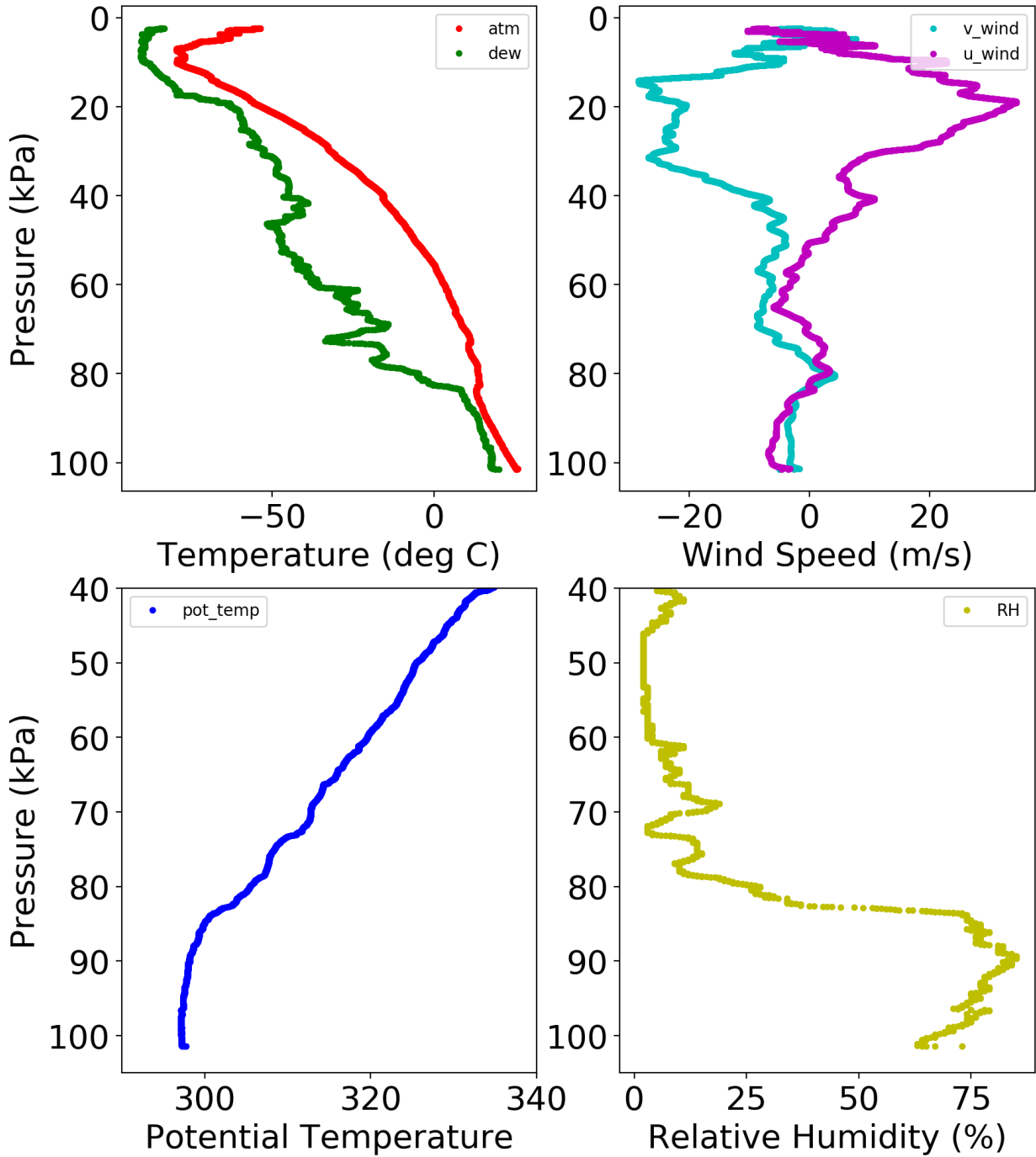
Transiting overnight to 14.383N and 55W to be in place at the center of the P3 dropsonde circle at 11:40 local tomorrow morning. By Friday at local noon we plan to be 20 nm upwind of BCO for an intercomparison.

### 6. Figures

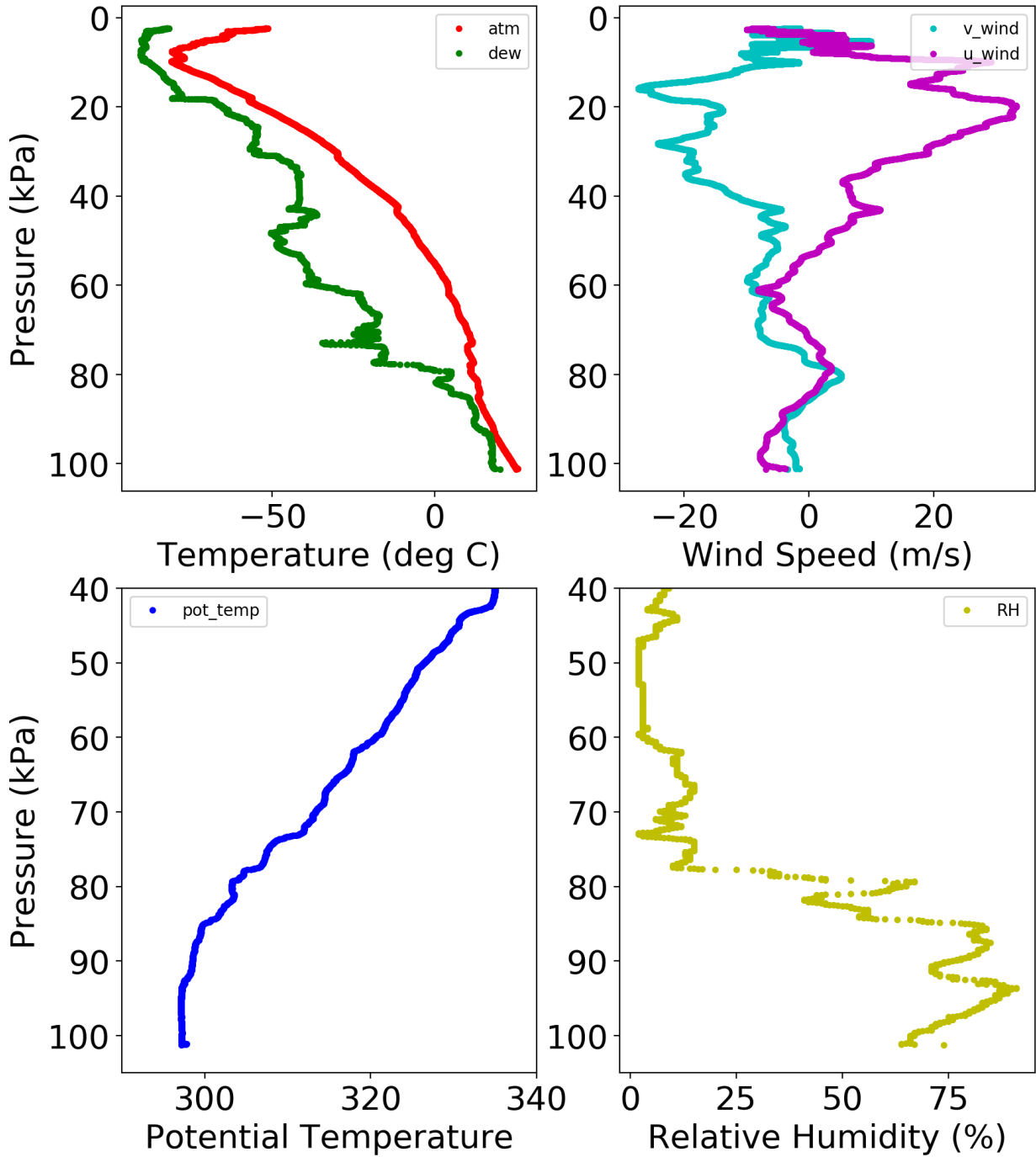
Today's track:



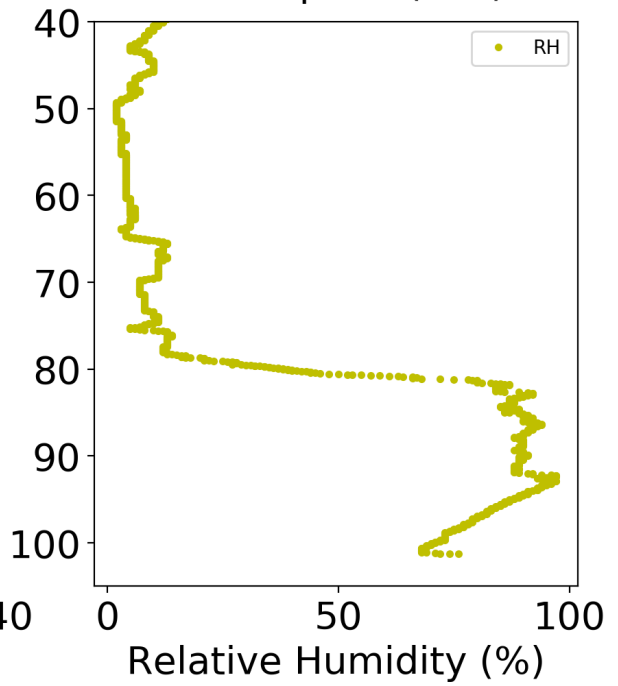
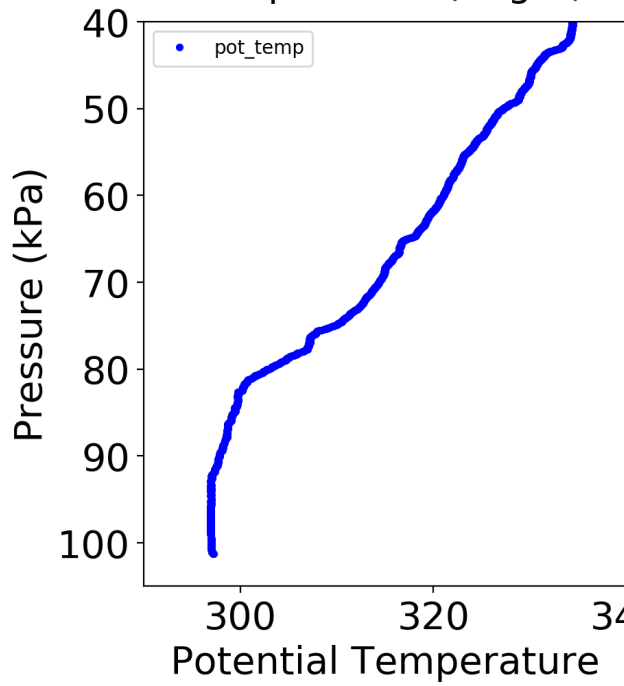
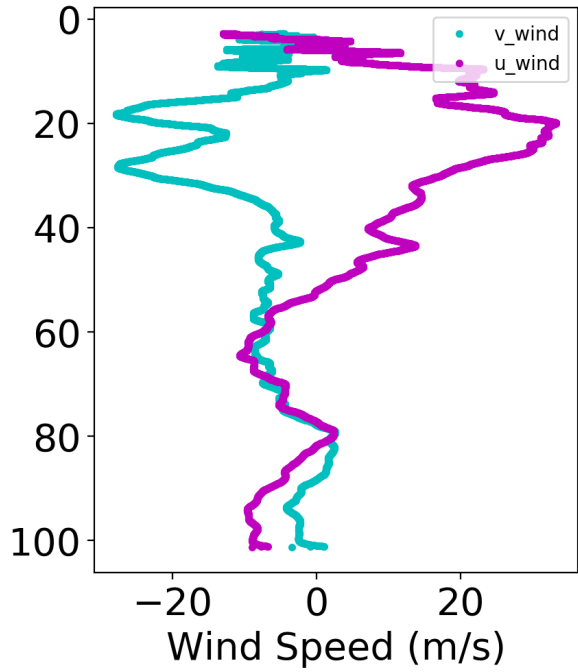
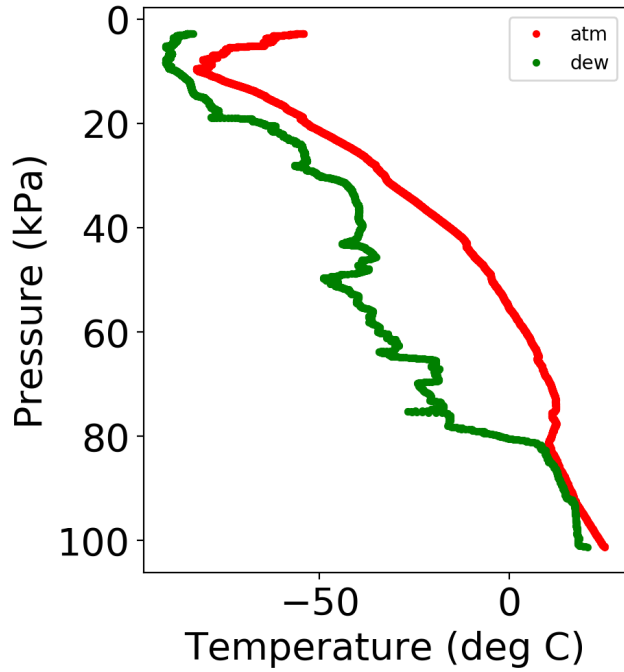
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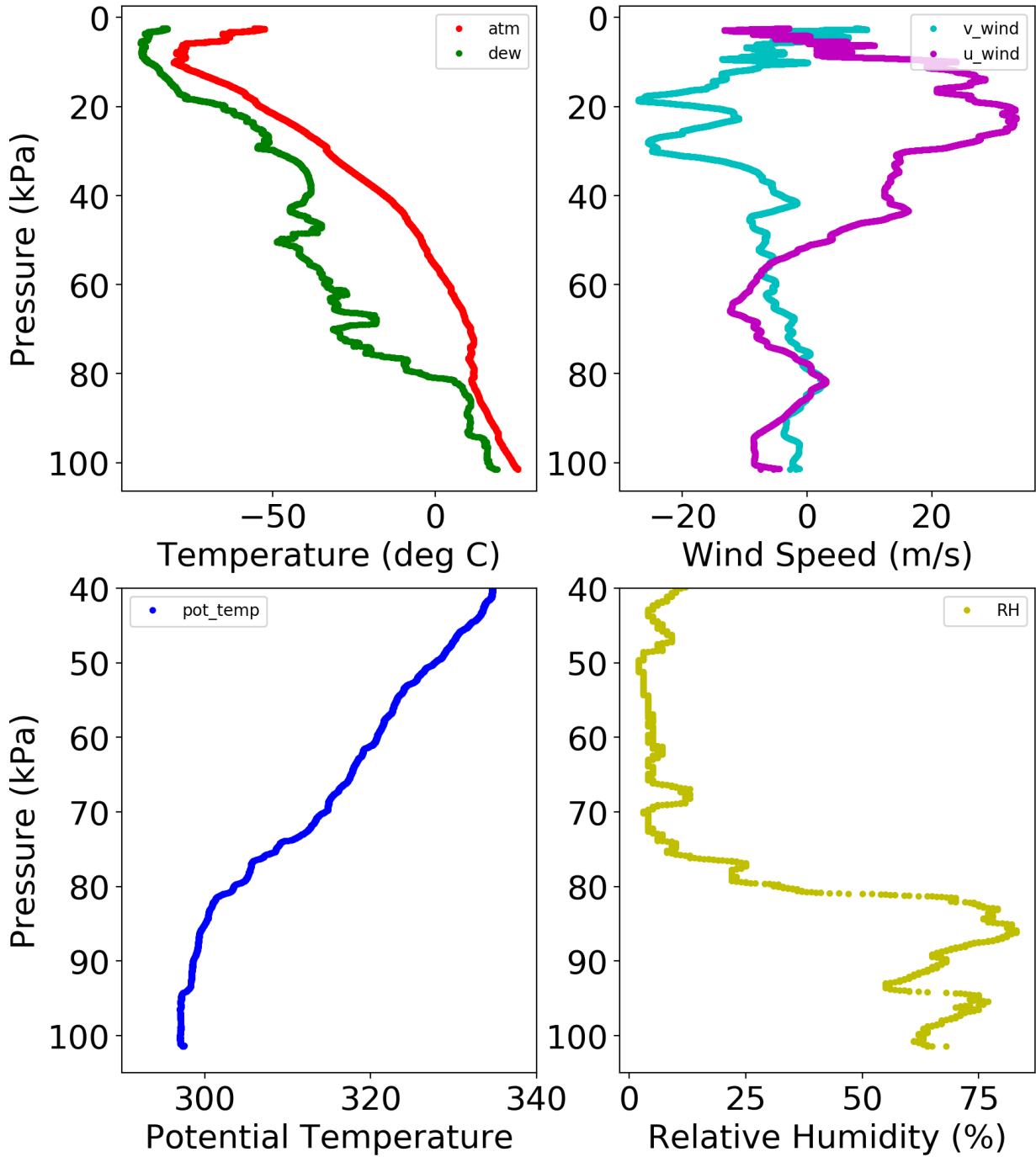
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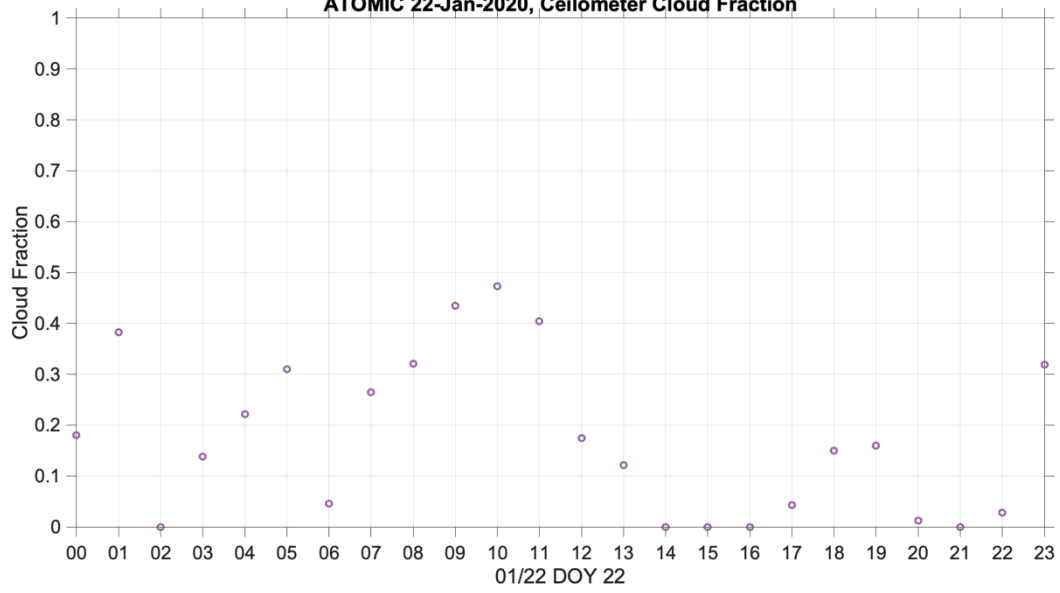
2020-01-22 1442UTC



ATOMIC 22-Jan-2020, Ceilometer Cloud Base Layers Detected



ATOMIC 22-Jan-2020, Ceilometer Cloud Fraction





ATOMIC 22-Jan-2020, Cloudbase Ht, Median  $\pm$  84/16th percentiles

