



Daily cruise report (24 January 2020)

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1. Objective

Today we crossed sailing south our first cyclonic anticyclonic eddies, the latter a beautiful North Brazil Ring, located south of Barbados where we are reaching the center. We characterized them with measurements from our CTD Rosette, uCTD, MVP, XBTs, pCO₂, and ADCPs while, in parallel, the overlying atmosphere was sampled by our first regular radiosounding, atmospheric mast, aerosols spectrometer, ceilometer and cloud camera. Everything works now well and the teams onboard are getting acquainted with every instrument and task. We started the regular radiosounding at 14:45 UTC. At Midnight local time, our position is 17°23.03'N 58° 24.69' not too far from the RV Maria S Merian.

2. Synoptic Situation

Quite clear sky on the morning, then becoming more cloudy on the middle of the day with isolated showers. Fair weather at the end of the afternoon.

Easterly wind 20kt, decreasing 10kt on the afternoon.

The waves are about 4 feet on the morning, decreasing 2 feet on the afternoon.

Mesoscale cloud patterns (18utc): « fish » near Barbados in transition to « gravel » more south

No sargassums..

Cloud observations : 01/23/20

Time (local)	Coverage	Types	Remarks
0800	0/8 High	N/a	
	2/8 Mid	Ac	
	2/8 Low	Cu	
1200	0/8 High	N/a	
	6/8 Mid	Ac	
	3/8 Low	Cu, TCU	Showers in the area
1600	0/8 High	N/a	
	1/8 Mid	Ac	
	4/8 Low	Cu, TCU	

3. Cruise-day Elements

Inter-calibration: No intercalibration today.

CTD Stations: We did 10 hours of MVP, deployed 15 XBTs, 5 CTDs and the uCTD. We observed a shallow and very fresh (salinity around 35) mixed layer (about 50 m deep) laying above a very salty layer 100 m thick with below a fresher and less oxygenated water mass. The sea surface Temperature was in the mean 27.2 and the surface Salinity 35.2.

Autonomous systems deployed: We have deployed two TRUSTED French and one NOAA drifters.

Overflights: No overflights. We are too far south.

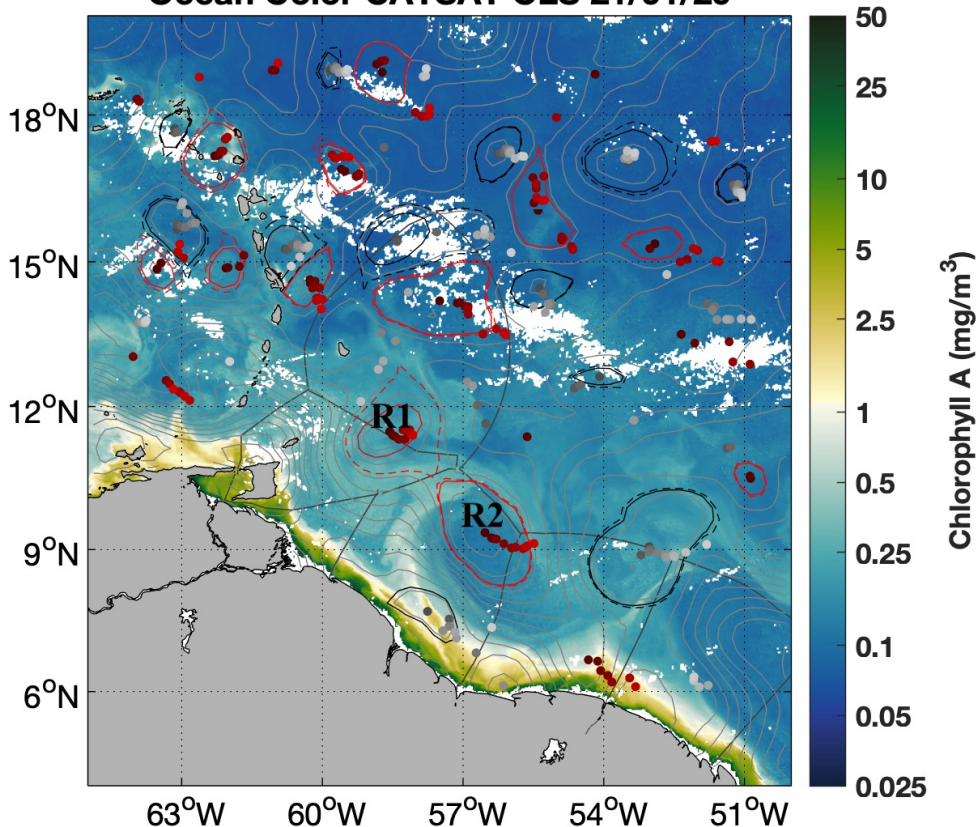
4. Instrument Status

We discovered that the Picarro inlet was not mounted properly. Now everything is well functioning and acquiring data.

5. Outlook

Tomorrow we will quit the Barbados to enter in Guyana waters to sample a very interesting region between the two North Brazil Anticyclones, Ring1 (R1) and Ring2 (R2).

Ocean Color CATSAT CLS 21/01/20



6. Figures

