



Daily cruise report (02 February 2020)

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1. Objective

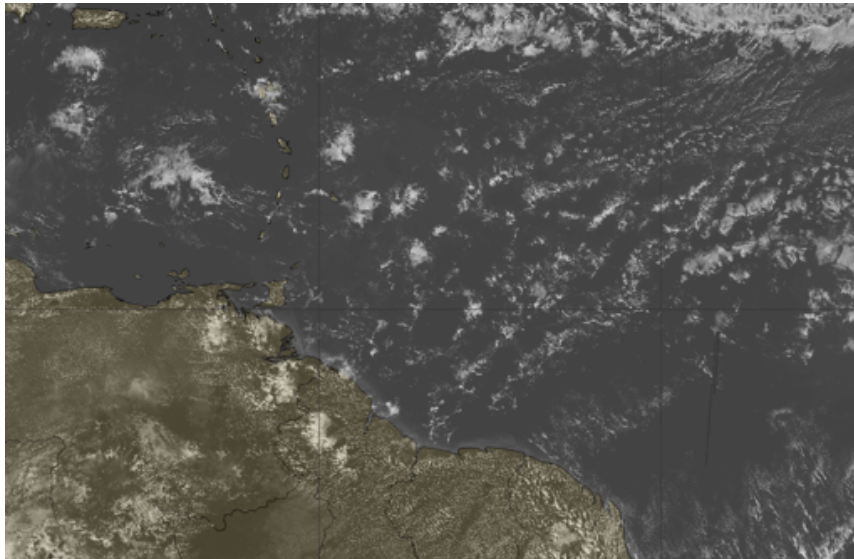
Today we made a southwest route to reach the strongest cold and fresh water pool of the region, enveloped by a very intense sea surface temperature front. In the way to the cold water pool we deployed 4 NOAA and 4 French drifters, all equipped with sensors to measure the very upper layer stratification that has an enormous role on air-sea interactions. There we met again with the Maria S Merian to undertake joint frontal crossovers, measuring contemporarily the ocean and atmosphere and the small scales that develop in frontal areas (Figure below).

2. Synoptic Situation

Moderate trade winds. Mostly sunny with isolated clouds.

Easterly wind 10kt.

Isolated sargassums.



Inter-calibration: No intercalibration today.

Stations:

| Date | Approx Local Time | Operation | Lat | Lon | NM | Operations |
|--|-----------------------------------|--|--------|---------|----|-------------------------------------|
| 02/02 | 00:30 | Deployment of Drifter NOAA @7°45'N | 7°45'N | | | |
| 02/02 | From approx. 02:30 to 11:00 02/02 | From WP3: 7°20'N 53°8'W go southwest to waypoint WP4: 6°12' 53°48'W MVP : speed 5 kts until 7°15'N then 10 kts, | 6°12'N | 53°48'W | 66 | MVP, 5 kts until 7°15'N then 10 kts |
| 02/02 | 04:00 | Deployment of Drifter NOAA @7°45'N | 7°15'N | | | |
| 02/02 | 07:30 | Deployment of Drifter NOAA @7°45'N | 6°45'N | | | |
| 02/02 | 13:45 | Deployment of 1 Drifter NOAA & 4 French | 6°15'N | | | |
| Reconvene with the Maria S. Merian. Start of the intense "zigzag" survey of the cold and fresh filament 6°25' 53°40.5'W | | | | | | |
| 02/02 | 15:30 4h if 8 kts | From WP1: 6°25' 53°40.5'W go northwestward to WP2: 6°54'N 53°48'W | 6°54'N | 53°48'W | 30 | MVP, 8 kts |
| 02/02 | 5 h if 8 kts | From WP2: 6°54'N 53°48'W go southwestward to WP3: 6°24'N 54°04'W | 6°24'N | 54°04'W | 35 | MVP, 8 kts |
| 02/02 | 4 h if 8 kts | From WP3: 6°24'N 54°04'W go northward to WP4: 6°54' 54°04'W | 6°54'N | 54°04'W | 30 | MVP, 8 kts |
| 03/02 | 4 h if 8 kts | From WP4: 6°54' 54°04'W go southwestward to WP5: 6°32'N 54°22'W | 6°32'N | 54°22'W | 30 | MVP, 8 kts |
| 03/02 | 5h15' hrs if 10 kts | From WP8: 6°32'N 54°22'W go northward to WP9: 7°06' 54°22'W | 7°06'N | 54°22'W | 41 | MVP, 8 kts |

Autonomous systems deployed: None

Overflights: No overflights. We are too far south.

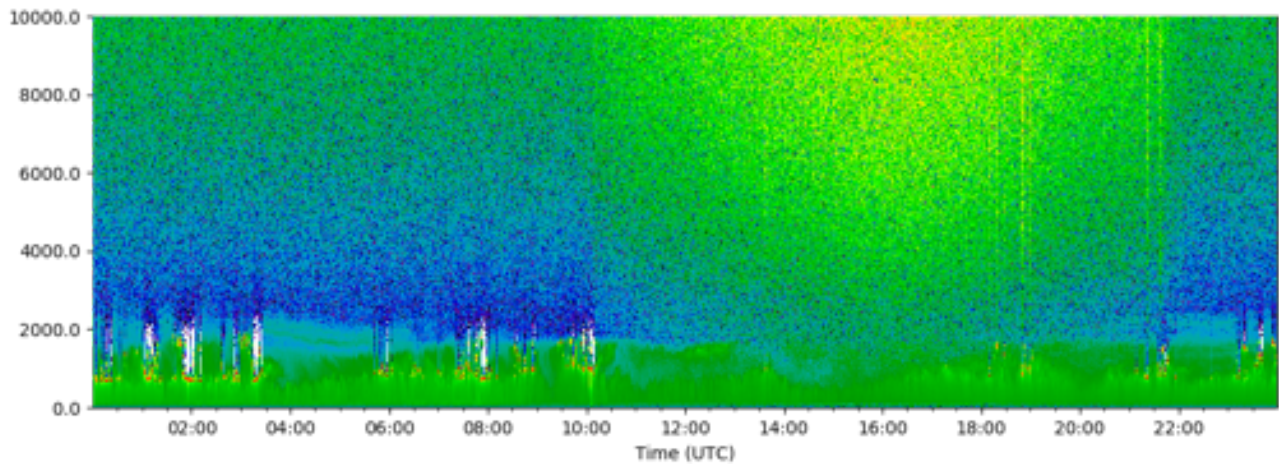
4. Instrument Status

All instruments seem to work well. Today Vaisala radiosounding reception was more stable.

5. Outlook

In the next 20 hours we are undertaking the frontal crossovers with the Maria S Merian.

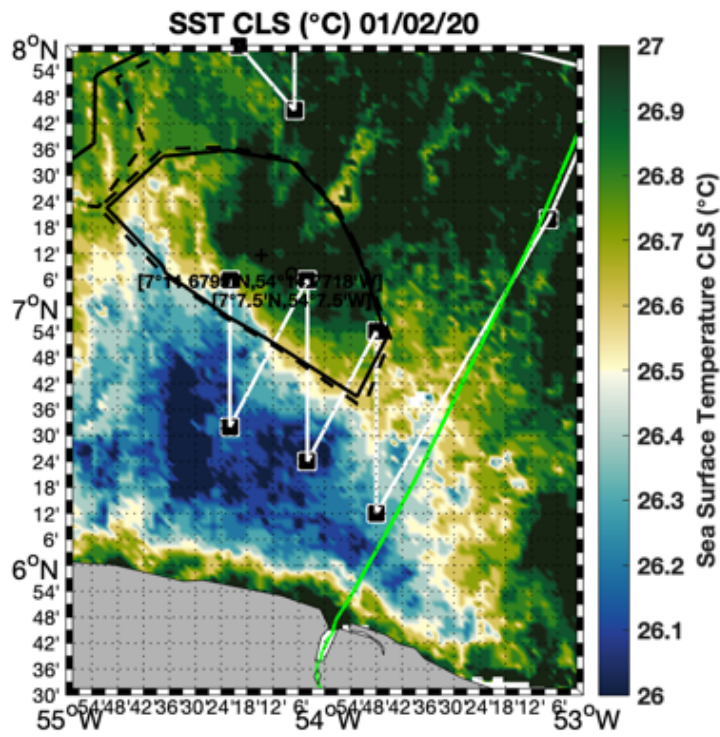
6. Figures



Celiometer R/V Atalante 28 January 2020



The Maria S Merian



The Maria S Merian and Atalante frontal crossover

