

Maria S Merian 0119 (19 January 2020)

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1. Objective

Coordinated atmosphere / ocean sampling – mostly underway – with RV Meteor. Upper ocean high resolution sampling with Moving Vessel Profiler. Meteor/Merian synchronized upper 200m CTD casts (microbiology) and hydrography full depth (4800m) cast. Halo and the P3 airplane ground truth sampling along flight path. Tests for Cloudkite.

2. Synoptic Situation

Sargassum spotted (not sampled);

3. Cruise-day Elements

Approx. Time (local)	Operation	Latitude	Longitude	Comm
	Continue Parallel course with Meteor			Heading towards northern "Meteor-race track" position
04:00	CTD#2 – Bio1	13° 46.33'N	57° 14.90'W	Max z=600m
06:00	CTD#3 - Bio2	13° 46.33'N	57° 14.90'W	Max z=200m
07:00	CTD#4	13° 46.33'N	57° 14.90'W	Full depth (4800m)
	Course to Halo flight track followed by eastward track along line between CC: 13°17'09"N; 57°54'00"W and NTAS: 14°44'35" N 50°56'42" W			(MVP in water) Along track: 6kn
13:00	Daily Meeting (Conference room)			
	Course to Halo flight track followed by eastward track along the surface projected flight path			MVP in water Along track: 6kn

Inter-calibration: Halo & P3 track sampling (coordinated with Meteor)

CTD Stations: CTD# 1- 4

Overflights: Halo

4. Instrument Status

Operational:

Ocean – ADCP 38 & 75kHz; TSG; X-Band Radar; Underway O2, Chl-a (spectrometer); Incubation (PP; filtration); Nutrient/lab analysis; CTD/O2 +rosette; MSS; Moving vessel profiler;
Atmosphere – Halo Wind Lidar; Disdrometer; W-Band Radar. MRR (rain), sun photometer, Cloudcamera; SMPS (Aerosol; ship based); radiosondes; DWD Metrology package (incl. radiation);

In preparation:

Ocean – Ferrybox pCO2; glider; uCTD, Microstructure; MIMS (O2/Ar, DSMS)
Atmosphere – MPCK+ (atmospheric state parameters+cloud microphysics; Cloudkite); Mini MPCK (atmospheric state parameters and fluxes; Cloudkite); SMPS (Aerosol; Cloudkite); ARTHUS Raman Lidar; Splash drone (atmospheric state parameters);

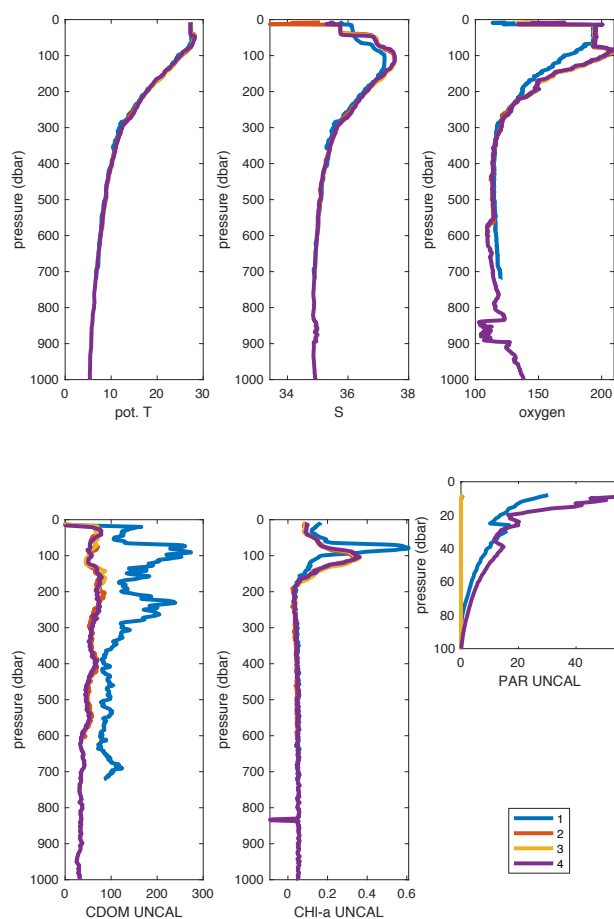
No functioning:

Ceilometer

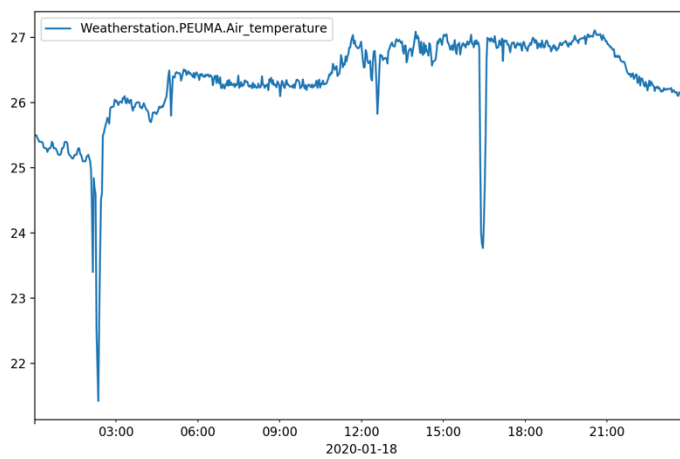
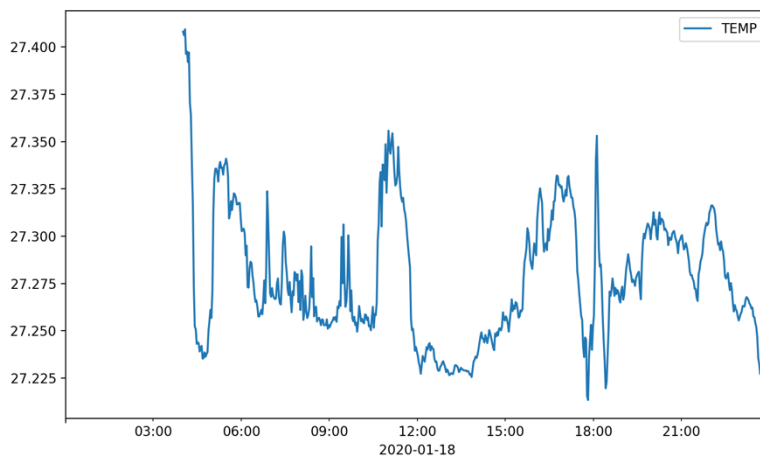
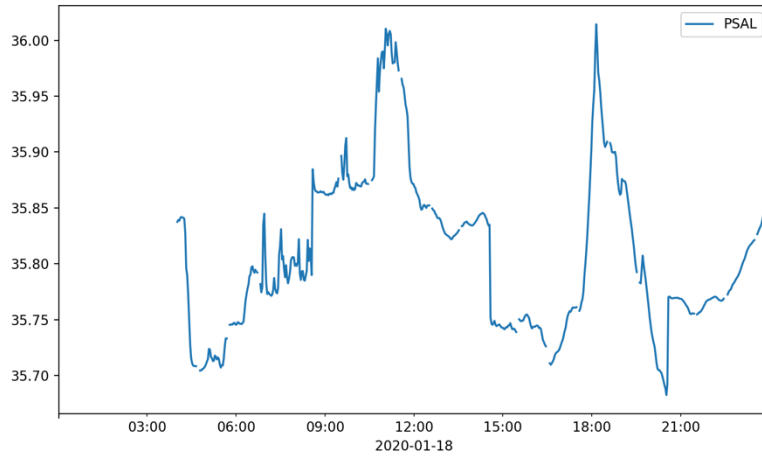
5. Outlook

Good

6. Figures



Selected profiles from CTD cast #1 to 4



Underway data Salinity, Water Temperature, Air temperature