Maria S Merian 0129 (29 January 2020)

Johannes Karstensen (Chief Scientist)

1. Objective

Ocean: Frontal survey CTD/MSS and MVP; atmosphere: LIDAR, Radar. Switched Radiosondes every 12h (south of 9°N). Coordination with lATALANTE on joint survey starting 30.1 noon. Seek coordination with saildrones but they are currently too far east (2-3 days to reach Rendezvous waypoint).

2. Synoptic Situation

No report

3. Cruise-day Elements

Approx. Time (local)	Operation	Latitude	Longitude	Comm
02:00	MSS casts (3)	07° 40.68‘N	51° 27.64‘W	200m
03:30	CTD# 38 – **Time important!!**	On way		600m
	CTD# 39	same pos.		200m
	CTD# 40	same pos.		200m
08:30	CTD# 41	07° 47.10‘N	51° 37.05‘W	
	MSS casts (3)	same pos.		200m
12:00	MSS casts (3)	07° 53.52‘N	51° 46.46‘W	200m
14:00	CTD# 42	07° 59.94‘N	51° 55.88‘W	
	MSS casts (3)	same pos.		250m
	Cloudkite test			
18:00	CTD# 43	08° 06.36‘N	52° 05.29‘W	
	MSS casts (3)	same pos.		200m

Inter-calibration: no
CTD Stations: see table
Overflights: no

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; Moving vessel profiler; Microstructure sonde; Ferrybox pCO2; MIMS (O2/Ar, DSMS), underway CTD

Glider ifm09; ifm 03; ifm12 (see https://gliderweb.geomar.de/ -> swarm 12;

Atmosphere – Halo Wind Lidar; Disdrometer; W-Band Radar. MRR (rain), sun photometer, Cloudcamera; SMPS (Aerosol; ship based); radiosondes; DWD Metrology package (incl. radiation); ARTHUS Raman Lidar; Splash drone (atmospheric state parameters); – MPCK+ (atmospheric state parameters+cloud microphysics; Cloudkite); Mini MPCK (atmospheric state parameters and fluxes; Cloudkite); SMPS (Aerosol; Cloudkite

No functioning: Ceilometer

5. Outlook

We will meet with lATALANTE and holefully the saildrones at the northern eddy boundary to do joint surveys.

6. Figures