

Meteor 0121 (2020)

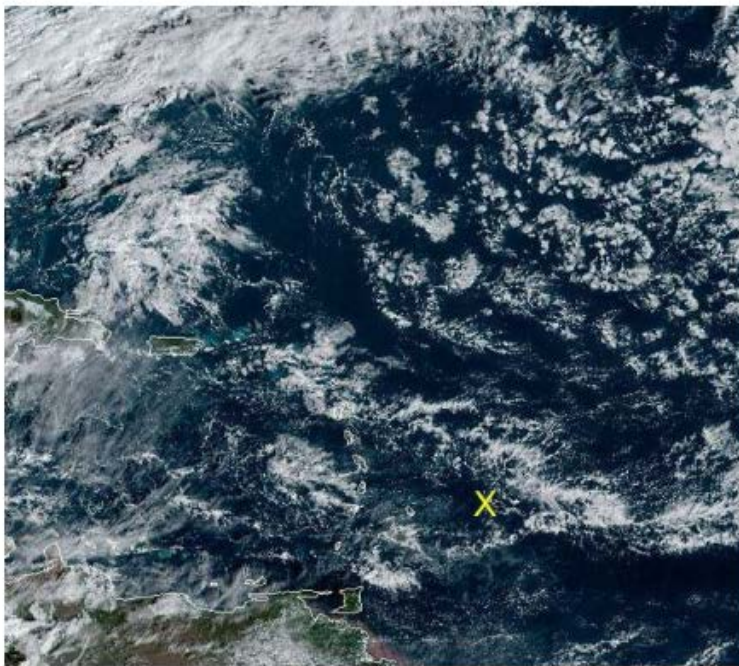
Stefan Kinne

1. Objective

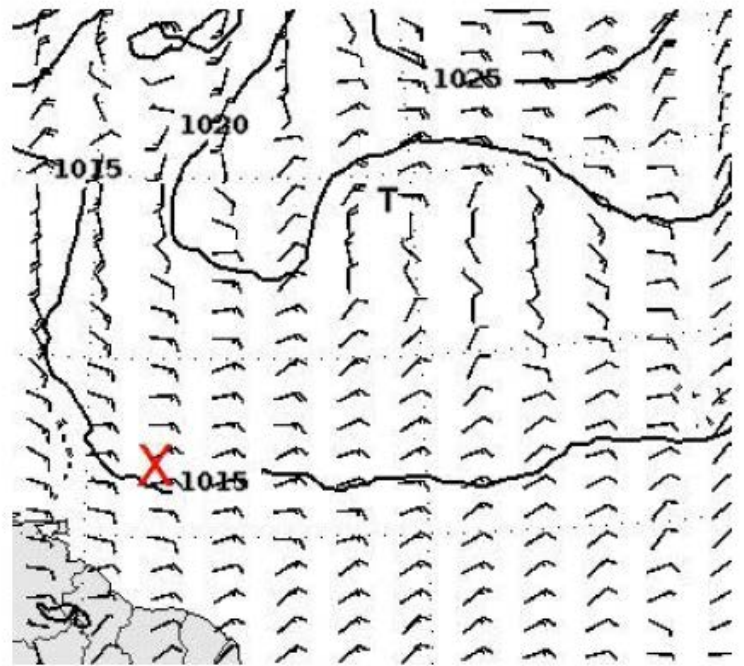
CTD survey in the larger region around the new L1 (14.182N/57.345W) location, the track crossing of METEOR and HALO, where the E.Anglia gliders will be deployed tomorrow. Test UAV operation. 7 radiosondes were released at 2.45, 6.45, 10.45, 14.45, 16.30 18.45 and 22.45 UTC.

The METEOR has been sampling along the 57.245W latitude. Now with the larger HALO flight circle (from a 90km to a 100km radius) and trying to keep relevance for the samples of the last days, the glider deployment position has moved further north. After an extended sampling for MPI-MM in the early morning hours the upper ocean survey continued by exploring of the larger area around the HALO/METEOR (north-eastern) track crossing. CTDs down to 800m were conducted every three hours (2hr traveling ~ 0.3 deg, 1 hour for the CTD). Hereby CTDs were taken 40km to the south, west, east and north (of the L1 position). The radiosonde launches continued on a regular 4 hour cycle with a bonus sonde by the DWD for the 18Z time-slot. First UAV test (first without an instrument and then with a temperature sensor) were successful.

2. Synoptic Situation



Satellitenbild GOES 21.01.2020 13:00 UTC



Vorhersage für Mittwoch 12 UTC

Weather observations (every 3hr)

20 01 21001 99138 70572 11598 60809 10261 20209 40156 53010 70381 86200 22242 04274
2//// 3//// 4//// 5//// 6//// ICE ////

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20 01 21031 99135 70572 46/// /0710 10261 20208 40156 50000 7///// 8///// 22242 04275
2///// 3///// 4///// 5///// 6///// ICE /////
20 01 21061 99131 70572 16/// /0711 10258 20204 40142 58014 7///// 8///// 22242 04274
2///// 3///// 4///// 5///// 6///// ICE /////
20 01 21091 99131 70573 46/// /0610 10258 20199 40137 55005 7///// 8///// 22261 04274
2///// 3///// 4///// 5///// 6///// ICE /////
20 01 21121 99135 70572 11598 50607 10257 20203 40157 53020 70381 81844 22202 04274
20301 30206 41105 50804 6///// ICE /////
20 01 21151 99137 70574 41598 60809 10258 20205 40158 50001 71522 81234 22271 04275
20301 30206 41005 50804 6///// ICE /////
20 01 21181 99141 70577 11498 60808 10248 20209 40135 57023 71522 81340 22272 04272
20301 30306 41105 50604 6///// ICE /////
20 01 21211 99142 70575 41497 70908 10247 20218 40128 55007 78082 873// 22221 04272
20301 30406 41005 50704 6///// ICE /////

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today we had blue skies with high cirrus in the morning and an extensive rainband (Bjorn's "fish" type) that passed us during the afternoon).

3. Cruise-day Elements

hourly means of ship data (1st line 0-1 UTC, 2nd line 1-2 UTC ... last line 23-24 UTC)

salinity PSU	Tdew °C	Tair °C	Twater °C	TrueDir deg	RH %	rel.Wind m/s	trueWind m/s	lw Rad W/m ²	sw Rad W/m ²	lat °N	lon °E
35.5498	20.86	26.02	27.39	67.18	72.88	9.81	9.17	414.35	-1	13.78	-57.25
35.5195	20.78	26.06	27.4	69.57	72.23	9.84	9.96	402.97	-1	13.65	-57.24
35.6004	20.9	26.11	27.42	64.98	72.72	9.81	10.02	398.7	-0.98	13.49	-57.24
35.6259	20.54	26.04	27.42	67.15	71.35	10.75	10.25	383.47	-1	13.45	-57.25
35.6261	20.74	25.92	27.41	60.67	72.72	9.3	10.3	391.18	-1	13.31	-57.24
35.5618	20.74	25.8	27.4	63.75	73.25	9.95	10.35	393.65	-1.08	13.15	-57.24
35.5485	20.66	25.76	27.4	70.62	73.08	10.45	10.32	396.33	-1	13.12	-57.26
35.5635	20.74	25.71	27.4	67.85	73.62	10.58	10.41	396.62	-1	13.12	-57.27
35.5912	20.46	25.66	27.42	68.6	72.62	10.21	10.01	377.17	-1	13.11	-57.28
35.577	19.85	25.63	27.36	61.22	70.05	13.1	10.14	371.67	-1	13.14	-57.26
35.6215	19.31	25.62	27.41	59.72	67.73	12.83	9.18	366.08	34.48	13.29	-57.25
35.5802	19.37	25.78	27.41	57.93	67.34	11.29	7.8	370.75	208.44	13.46	-57.25
35.538	20.37	25.8	27.41	69.77	71.65	6.88	6.56	382.9	461.63	13.53	-57.25
35.5492	20.7	25.59	27.34	68.2	74.1	9.94	8.87	390.8	671.27	13.57	-57.28
35.6628	20.76	25.48	27.44	74.25	74.76	9.05	8.94	384.36	822.75	13.7	-57.38
35.6945	21.02	25.08	27.46	72.35	77.87	9.07	8.53	396.12	808.83	13.75	-57.42
35.4617	21.23	25.02	27.32	78.45	79.15	9.12	9.31	396.13	875.98	13.89	-57.52
35.4628	21.06	24.52	27.26	79.82	80.7	8.49	8.43	400.85	774.2	14.05	-57.63
35.5313	21.17	24.75	27.25	78.25	80.1	7.98	7.76	398.82	652.37	14.17	-57.71
35.4859	21.73	23.81	27.16	76.65	87.92	11.91	8.65	431.62	207.78	14.19	-57.69
35.398	21.67	24.23	27.12	67.98	85.27	14.13	9.74	435.93	91.73	14.18	-57.54
35.3974	20.77	25.39	27.24	80.58	75.33	11.97	10.2	436.33	12.92	14.18	-57.42
35.3882	20.26	25.8	27.22	70.3	71.07	15.21	12.09	426.6	-0.4	14.18	-57.38
35.354	20.06	25.81	27.14	64.92	70.14	16.38	12.15	415.34	-1	14.18	-57.24

inter-calibration: none
 CTD stations: 7
 radiosondes: 7
 overflights: 0

station no.	UTC	device	action	latitude	longitude	depth	contact person
M161 08	21 jan 2020 / 02:47-03:24	CTD	CTD	13°27.071 N	57°14.989' W	800	Baranowski
M161 09	21 jan 2020 / 05:47-06:45	CTD	CTD	13°07.120 N	57°15.032' W	800	Baranowski
M161 10	21 jan 2020 / 07:00-09:02	CTD	CTD / MPI-MM	13°06.819 N	57°17.054' W	200	Baranowski
M161 11	21 jan 2020 / 12:06-12:42	CTD	CTD	13°31.510 N	57°14.726' W	800	Baranowski
M161 12	21 jan 2020 / 14:35-15:12	CTD	CTD	13°42.827 N	57°23.223' W	800	Baranowski
M161 13	21 jan 2020 / 18:31-19:09	CTD	CTD	14°10.993 N	57°43.353' W	800	Baranowski
M161 14	21 jan 2020 / 21:28-22:04	CTD	CTD	14°10.924 N	57°25.000' W	800	Baranowski

4. Instrument Status

Instrument-Status (**W**-working, **P**-partially-working, **F**-failure, **U**-untested)

	status	operators
radiosondes	W	Katharina, Imke, Yanmichel, Dorothea, Kevin
cloud-radar	W	Heike, Johannes
micro-radiometer	W	Heike, Johannes
spect-radiometer	W	Heike, Johannes
Raman-lidar	W	Ludwig
cloud-kite	U	Oliver, Marcel, Marcel, Antonio, Robert, Sanola
Picarro	W	Sebastian
micro-biology	U	Wiebke, Jan, Abiel
ADPC ocean curr.	W	Callum, Beth
thermosalinograph	W	Callum, Beth
glider	U	Callum, Beth
UAV	W	Darek, Jakub, Michal, Wojciech
eddy-flux-data	W	Katharina, Imke, Heike
wind-lidar (DTU)	W	Geiske, Kevin
wind-lidar (Bre)	F	Geiske, Kevin
MAX-DOAS	W-	Alma
ceilometer	W-	Stefan
cloud camera	W-	Stefan
sunphotometer	W-	Stefan, Przemek, Andreas
aero scat/abs	W	Przemek
WRAS (aero size)	W-	Alma
CTD	W	Darek and friends

5. Outlook

Tomorrow morning we will reach the glider deployment (L1) point. First a CTD down to 1000m is sampled. Then the gliders will be deployed from a small rescue boat. For the afternoon a HALO calibration overpass is expected and towards the end of the day the METEOR will head on a southern direction along the 57.245W longitude.