

# Meteor 0125 (2020)

Stefan Kinne ( 26 jan 2am)

## 1. Objective

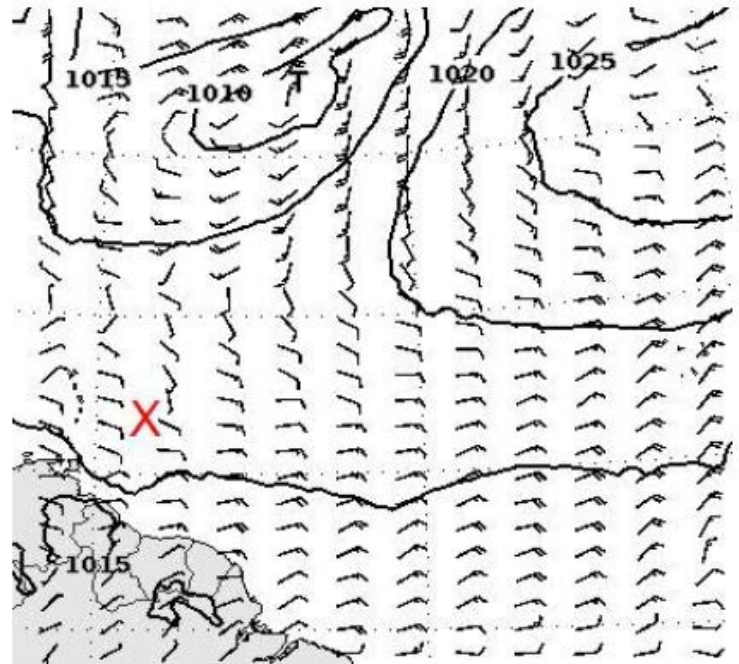
CTD survey on all directions (N, S.W, E) around the L2 point. 7 radiosondes were launched at 2.45, 6.45, 10.45, 14.45, 16.30 18.45 and 22.45 UTC.

We had reached the L2 point (the southern HALO / METEOR track crossing at 12.418N / 57.245W) in the morning. The cloud kite instrumentation needed some attention (weight reduction) and we needed to be back at this location for certain exercises with HALO the next morning. Thus, we started a regional survey of the upper ocean with CTD casts (S, E, W, N) around the L2 location – similar to the survey at the L1 location a couple of days ago. The Polish group deployed a light under-water sensor (usually intended to be operated from a UAV) on a rod to sample (during CTD stops) the temperature profile near the ocean surface. We had a lot of rain today and were unable to take sun-samples.

## 2. Synoptic Situation



Satellitenbild GOES 25.01.2020 13:30 UTC



Vorhersage für Sonntag 12UTC

## Weather observations (every 3hr)

```
20 01 25001 99136 70572 16/// /1005 10251 20218 40149 53017 7///// 8///// 22241 04275
2///// 3///// 4///// 5///// 6///// ICE /////
20 01 25031 99133 70572 46/// /1207 10249 20219 40150 52001 7///// 8///// 22242 04274
2///// 3///// 4///// 5///// 6///// ICE /////
20 01 25061 99130 70572 16/// /1106 10253 20208 40136 56014 7///// 8///// 22242 04273
2///// 3///// 4///// 5///// 6///// ICE /////
20 01 25091 99127 70572 46/// /0607 10237 20216 40137 53001 7///// 8///// 22242 04275
2///// 3///// 4///// 5///// 6///// ICE /////
```

```

20 01 25121 99125 70572 11695 89901 10228 20220 40162 53025 78082 883// 22241 04274
20100 310// 40702 5///// 6///// ICE /////
20 01 25151 99122 70572 41297 83207 10233 20220 40167 50005 78082 873// 22242 04272
20201 310// 40702 5///// 6///// ICE /////
20 01 25181 99123 70571 11598 73003 10244 20220 40143 58024 72582 873// 22211 04273
20100 308// 40703 5///// 6///// ICE /////
20 01 25211 99124 70572 41598 72803 10249 20217 40138 55005 71582 85841 22271 04274
20100 307// 40702 5///// 6///// ICE /////

```

lots of precipitation all day with clearing towards the end of the day.

### 3. Cruise-day Elements

IWV (integrated water vapor): 37 kg /m2 +/- 5  
LWP (liquid water path): 610 g /m2 +/- ?

Time	0-3UTC	4-6UTC	7-9UTC	10-12UTC	13-15UTC	16-18UTC	19-21UTC
Height_m	424.82	1162.67	1006.16	1140.31	313.03	1185.03	1095.59
max_hydro_frac_low	0.01	0.79	0.79	1.00	1.00	0.78	0.12
Height_m	2235.91	1855.80	1520.42	1207.39	1207.39	1587.49	1542.78
max_hydro_frac_mid	0.51	0.93	0.91	1.00	1.00	0.95	0.69
Height_m	14935.70	14935.70	14935.70	14935.70	12431.51	14935.70	14935.70
max_hydro_frac_high	0.01	0.01	0.01	0.01	0.02	0.01	0.01

Low=bis1200m, mid=bis 6000m, high=bis 15000

### hourly means of ship data (1<sup>st</sup> line 0-1 UTC, 2<sup>nd</sup> 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 <sup>2</sup>	sw Rad W/m <sup>2</sup>	lat °N	lon °
35.3019	21.87	25.18	27.46	109.14	81.46	6.15	5	393.39	-1	13.58	-57.25
35.3077	21.82	25.21	27.34	115.82	81.12	8.33	5.6	400.58	-1	13.48	-57.24
35.4224	21.72	25.04	27.38	112.9	81.4	8.89	6.74	420.92	-1	13.35	-57.24
35.4664	21.45	24.93	27.4	121.55	80.6	7.51	7.15	428.67	-0.9	13.3	-57.25
35.504	20.43	25.1	27.37	102.73	74.85	9.16	7.1	427.12	-1	13.22	-57.24
35.3722	20.57	25.4	27.32	109.3	74.37	7.8	5.12	435.83	-0.62	13.08	-57.25
35.3354	20.4	25.02	27.39	125.18	75.13	4.2	3.95	428.98	-0.63	13	-57.25
35.3389	20.55	25.28	27.36	77.77	74.72	4.81	3.31	430.82	-0.07	12.93	-57.24
35.3696	21.7	24.24	27.5	68.67	85.38	6.7	6.63	433.78	-0.83	12.79	-57.25
35.3636	21.78	23.96	27.5	98.83	87.15	5.55	5.25	433.48	-0.45	12.71	-57.25
35.3606	21.58	23.72	27.48	70.57	87.42	6.71	6.23	434.05	12.73	12.64	-57.25
35.3505	21.79	23.12	27.47	119.27	91.77	4.44	2.28	437.9	50.33	12.52	-57.25
35.34	21.84	22.81	27.35	178.15	93.73	3.82	4.23	440.92	139.85	12.42	-57.25

35.4082	21.71	23.11	27.33	291.67	91.37	1.92	4.46	446.33	201.82	12.37	-57.25
35.5404	22.08	23.18	27.23	329.32	93.15	3.28	6.27	448.77	222.38	12.23	-57.24
35.5078	22.03	22.96	27.2	316.32	94.02	7.56	7.71	445.78	180.72	12.13	-57.24
35.5261	22.13	23.35	27.2	308.57	92.4	7.74	6.62	445.95	348.37	12.17	-57.21
35.5689	22.08	23.92	27.32	295	89.12	5.74	3.96	445.45	274.58	12.28	-57.13
35.3976	22.24	24.54	27.45	296.85	86.64	4.97	4.11	437.2	329.08	12.38	-57.05
35.3888	22.15	24.92	27.57	272.78	84.22	4.18	2.54	432.02	256.35	12.42	-57.02
35.1453	21.74	24.98	27.34	276.13	81.92	6.46	3.52	417.98	141.5	12.42	-57.14
35.1963	21.5	25.06	27.4	293.1	80.25	5.42	2.35	400.2	23	12.42	-57.2
35.2703	20.98	25.54	27.52	99.8	75.47	3.48	2.37	427.92	-0.53	12.42	-57.32
35.3118	21.17	25.58	27.39	27.34	76.15	4.52	4.32	423.9	-0.66	12.42	-57.39

inter-calibration: none  
CTD stations: 8  
radiosondes: 7  
overflights: none

station no.	UTC	device	action	latitude	longitude	depth	contact person
M161 45	25 jan 2020 / 03:07-03:44	CTD	CTD	13°17.977 N	57°14.724' W	800	Baranowski
M161 46	25 jan 2020 / 06:15-06:51	CTD	CTD	12°59.957 N	57°14.706' W	800	Baranowski
M161 47	25 jan 2020 / 09:10-09:47	CTD	CTD	12°42.761 N	57°14.724' W	800	Baranowski
M161 48	25 jan 2020 / 12:27-13:03	CTD	CTD	12°25.063 N	57°14.747' W	800	Baranowski
M161 49	25 jan 2020 / 15:23-15:59	CTD	CTD	12°07.525 N	57°14.697' W	800	Baranowski
M161 50	25 jan 2020 / 18:59-19:38	CTD	CTD	12°25.086 N	57°01.038' W	800	Baranowski
M161 51	25 jan 2020 / 20:36-21:11	CTD	CTD	12°25.117 N	57°10.122' W	800	Baranowski
M161 52	25 jan 2020 / 22:23-22:59	CTD	CTD	12°25.120 N	57°19.346' W	800	Baranowski

#### 4. Instrument Status

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

	status	operators
radiosondes	<b>W</b>	Katharina, Imke, Yanmichel, Almuth, Kevin
cloud-radar	<b>W</b>	Heike, Johannes
micro-radiometer	<b>W</b>	Heike, Johannes
spect-radiometer	<b>W</b>	Heike, Johannes
Raman-lidar	<b>W</b>	Ludwig
cloud-kite	<b>P</b>	Oliver, Marcel, Marcel, Antonio, Robert, Sanola
Picarro	<b>W</b>	Sebastian
micro-biology	<b>W</b>	Wiebke, Jan, Abiel
ADPC ocean curr.	<b>W</b>	Callum, Beth

thermosalinograph		W	Callum, Beth
glider		W	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, John
aero scat/abs		W	Przemek
WRAS (aero size)		W	Alma
CTD		W	Darek and friends (almost all)

### 5. Outlook

Tomorrow, after attaching a now lighter instrument load, we will steam into the wind-direction off L2 in an easterly direction and await 4 HALO overpasses. We plan to deploy an ARGO float just outside the BB EEZ and then return to L2 with regular CTD stops.

