

Meteor 0118 (2020)

Stefan Kinne

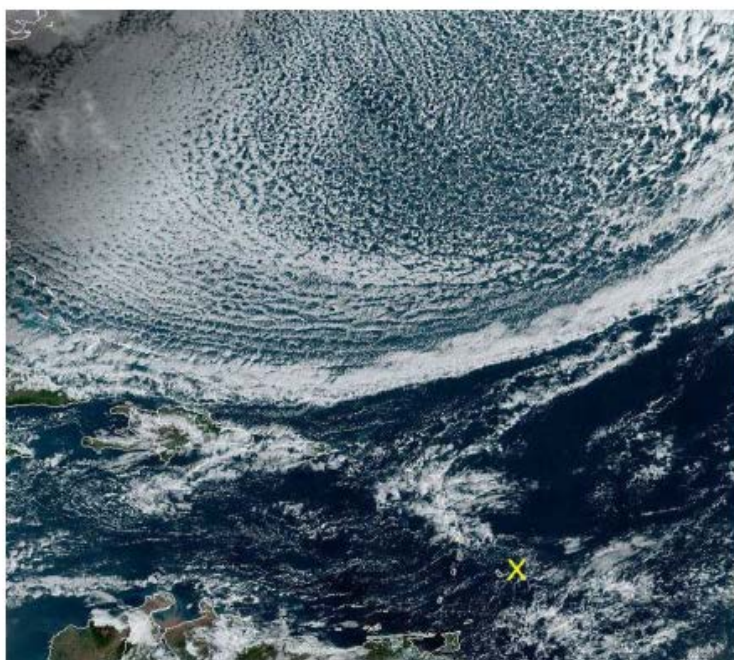
1. Objective

Inter-Calibration opportunity (ship vs ship / ship vs BCO), trade-wind cloud-life tests (ships moving away into the wind at lower cloud base from the BCO, CTD instrument tests.

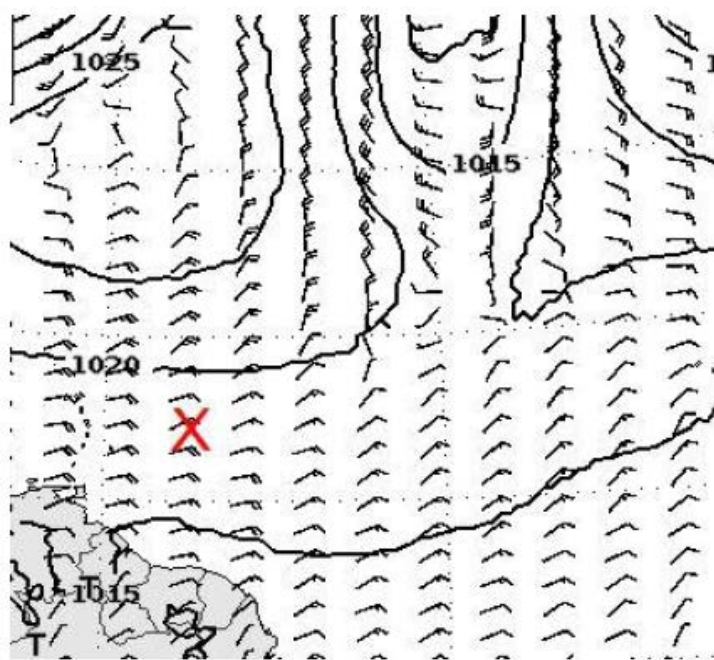
6 radiosondes were released at 6.45, 10.45, 14.45, 16.30, 18.45 and 22.45.

The METEOR parked at 7am in front of the BCO site and the MERIAN joined the parking at about 9am. At 12 am both METEOR and MERIAN departed side by side from the BCO site at the east coast at Barbados in a 65 degree direction, the moving direction of lower cloud bases until sunset. Intermittent clouds in the early morning were replaced by blue skies (for ideal sun-photometer and MAX-DOAS sampling conditions) which eventually yielded a brief green flash at sunset. Both ships have a brief stop at 16.30 to test the CTD of the METEOR on operational fitness for extensive CTD activities for microbiological samples the next morning (at 4am) at the designated METEOR / HALO track crossing at 13.785N / 57.245W – the location where in the next days the gliders of GEOMAR and East Anglia should be released.

2. Synoptic Situation



Satellitenbild GOES 18.01.2020 13:00 UTC



Vorhersage für Sonntag 12 UTC

Weather observations (every 3hr)

20	01	18001	99131	70596	16///	/0803	10256	20216	40165	53013	7/////	8/////	22200	04279
2	///	3	///	4	///	5	///	6	///	ICE	///	///	///	///
20	01	18031	99130	70595	46///	/0507	10264	20219	40168	50003	7/////	8/////	22231	04275
2	///	3	///	4	///	5	///	6	///	ICE	///	///	///	///
20	01	18061	99132	70594	16///	/0607	10263	20210	40160	58008	7/////	8/////	22211	04277
2	///	3	///	4	///	5	///	6	///	ICE	///	///	///	///
20	01	18091	99132	70594	46///	/0607	10262	20214	40157	55003	7/////	8/////	22200	04276
2	///	3	///	4	///	5	///	6	///	ICE	///	///	///	///

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20 01 18121 99132 70594 11498 20609 10264 20217 40173 53016 70200 82200 22211 04274
20201 307// 40804 5//// 6//// ICE //
20 01 18151 99134 70589 41498 30610 10265 20213 40178 50005 70380 83800 22212 04275
20302 306// 40704 5//// 6//// ICE //
20 01 18181 99135 70586 11598 10709 10264 20204 40160 58018 70180 81800 22212 04272
20302 306// 40804 5//// 6//// ICE //
20 01 18211 99137 70583 41598 10509 10266 20195 40162 53002 70100 81800 22212
04274 20302 307// 40804 5//// 6//// ICE //

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3. Cruise-day Elements

IWV (integrated water vapor): 30 kg /m2
LWP (liquid water path): 42 g/m2

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

salinity	Tdew	Tair	Twater	TrueDir	RH	rel.Wind	trueWind	lw Rad	sw Rad	lat	lon
PSU	°C	°C	°C	deg	%	m/s	m/s	W/m ²	W/m ²	°N	°E
0	21.55	25.37	27.91	72.2	78.92	2.98	2.98	382.33	-1.25	13.1	-59.63
0	21.64	25.11	27.93	78.21	80.56	2.73	2.74	382.97	-1.18	13.1	-59.63
35.7304	21.99	25.58	27.61	72.05	80.13	7.71	5.3	391.97	-1	13.07	-59.61
35.7529	21.79	26.44	27.51	58.72	75.12	12.6	7.55	401.82	-1	13.04	-59.47
35.8605	21.63	26.35	27.57	57.22	74.92	9.88	7.8	389.41	-1	13.15	-59.4
35.9568	21.51	26.27	27.66	60.55	74.65	7.65	7.33	388.28	-1	13.17	-59.4
35.9556	21.39	26.26	27.63	60.97	74.22	7.25	6.95	389.62	-1	13.17	-59.4
35.9088	21.45	26.2	27.6	60.08	74.72	7.78	7.49	396.05	-0.88	13.17	-59.4
35.9249	21.54	26.21	27.6	62.05	75.12	7.44	7.12	392.92	-1	13.17	-59.4
35.9164	21.42	26.21	27.6	60.43	74.53	7.7	7.39	390.22	-1	13.17	-59.4
35.9411	21.53	26.2	27.6	63.53	75.07	8.06	7.74	386.27	17.75	13.17	-59.4
35.8977	21.66	26.3	27.54	61.98	75.28	9.74	8.1	390.08	204.15	13.18	-59.39
35.8106	21.77	26.27	27.42	58.98	75.85	13.47	8.95	406.45	283.73	13.23	-59.29
35.7925	21.59	26.38	27.4	59.23	74.52	13.82	9.23	399.02	654.28	13.29	-59.15
35.7876	21.85	26.38	27.45	57.37	75.72	14.58	9.99	402.78	756.07	13.35	-59.01
35.763	21.09	26.45	27.45	58.62	72.03	14.98	10.52	395.9	862.43	13.41	-58.88
35.7368	20.7	26.42	27.5	59.5	70.32	13.79	10.1	392.07	886.77	13.47	-58.75
35.7877	20.5	26.32	27.4	63.52	69.95	13.14	9.55	389.68	824.32	13.52	-58.65
35.9537	20.27	26.37	27.35	59.12	68.75	13.07	8.99	384.53	692.67	13.57	-58.52
35.8561	20.15	26.49	27.44	55.95	67.72	12.53	9.02	384.07	496.35	13.62	-58.41
35.7316	19.37	26.61	27.45	56.03	64.18	10.55	8.75	378.82	261.37	13.67	-58.32
35.7068	19.84	26.46	27.33	51.15	66.59	12.87	9.72	379.15	46.56	13.69	-58.26
35.7234	20.23	26.21	27.45	57.53	69.28	12.43	8.8	376.85	-1.25	13.74	-58.15
35.7693	20.1	26.05	27.5	48.83	69.29	13.59	10.6	381.14	-1.03	13.79	-58.05

inter-calibration: Meteor and Merian (side by side the entire day)
CTD stations: 1

radiosondes: 5
 overflights: 0

station no.	UTC	device	action	latitude	longitude	depth	contact person
M161 01	18 jan 2020 / 20:38-20:54	CTD	CTD test	13°40.248 N	58°18.482' W	10	Baranowski

4. Instrument Status

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

	today	operators
radiosondes	W	Katharina, Imke, Yanmichel
cloud-radar	W	Heike, Johannes
micro-radiometer	W	Heike, Johannes
spect-radiometer	W	Heike, Johannes
Raman-lidar	P	Ludwig
cloud-kite	U	Oliver, Marcel, Marcel, Antonio, Robert, Sanola
Picarro	W	Sebastian
micro-biology	U	Wiebke, Jan, Abiel, John
ADPC ocean curr.	W	Callum, Beth
thermosalinograph	W	Callum, Beth
glider	U	Callum, Beth
UAV	U	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

5. Outlook

We wait to meet/match HALO on its approach to Barbados and other coordination activities ... otherwise we default to the standard sampling at the 57.254W longitude. the deployment of gliders on the first cloud-kite operation will be shifted to Jan 21 or later due to expected higher waves and winds.