

20 02 23181 99219 70498 11598 11310 10241 20190 40187 58015 70200 81200 22212 04246
 20301 310// 40903 5///// 6///// ICE /////
 20 02 23211 99222 70495 41598 11309 10240 20187 40189 53002 70100 81200 22212 04247
 20302 309// 40903 5///// 6///// ICE /////

no cirrus, few scattered low clouds, no rain, less dust and lower wind-speeds

3. Cruise-day Elements

IWV (integrated water vapor): 25 kg /m2 +/- 2
 LWP (liquid water path): 17 g /m2 +/- 64

Time	0-3UTC	4-6UTC	7-9UTC	10-12UTC	13-15UTC	16-18UTC	19-21UTC	22-24UTC
Height_m	670.77	648.41	1185.03	626.05	849.65	760.21	737.85	693.13
max_hydro_frac_low	0.03	0.14	0.20	0.00	0.11	0.09	0.09	0.09
Height_m	1319.19	1430.98	1498.06	1207.39	1654.57	1207.39	1207.39	1207.39
max_hydro_frac_mid	0.03	0.15	0.25	0.00	0.04	0.00	0.00	0.00
Height_m	12836.47	12878.56	5987.42	12878.56	12878.56	5987.42	12878.56	12878.56
max_hydro_frac_high	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

low=up to 1200m, mid=up to 6000m, high=up to 15000m

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
36.6641	19.39	24.41	25.27	101.93	73.23	11.58	7.89	380.42	-1	19.78	-51.69
36.9025	18.85	24.34	25.32	97.82	71.05	10.85	6.95	370.92	-1	19.9	-51.58
37.0475	18.73	24.19	25.24	96.58	71.22	10.05	5.85	369.22	-1	20.03	-51.46
37.2599	19.17	24.06	25.07	96.05	73.73	9.94	5.71	397.37	-0.88	20.17	-51.33
37.3781	19.03	24.04	24.89	102.07	73.1	10.81	7.1	373.7	-1	20.3	-51.21
37.3324	18.81	23.9	24.93	103.05	72.8	10.21	6.52	368.18	-1	20.43	-51.09
37.3613	19.04	23.85	24.93	115.3	74.07	10.73	7.81	383.2	-1	20.57	-50.97
37.3896	19.24	23.75	24.93	115.38	75.4	9.15	5.99	400.2	-0.9	20.7	-50.85
37.3737	18.99	23.75	24.89	122.73	74.37	10.88	8.46	385.92	-0.92	20.84	-50.72
37.316	18.68	23.98	25.02	123.27	71.83	10.38	8.04	369.88	1.33	20.97	-50.6
37.4072	18.58	24.06	24.82	123.37	71	10.73	8.7	366.28	103.4	21.1	-50.48
37.5046	18.65	24.08	24.37	121.48	71.23	10.38	8.15	365.63	326	21.22	-50.37
37.5	18.71	24.13	24.44	125.8	71.32	10.78	9.07	374.28	541.68	21.35	-50.25
37.4986	19.38	23.91	24.42	120.72	75.5	11.04	8.85	392.93	614.12	21.47	-50.14
37.4964	18.77	24.2	24.57	134.08	71.33	9.73	9.16	381.5	845.83	21.53	-50.07
37.4837	18.71	24.14	24.59	134.8	71.25	10.32	9.23	379.82	860.52	21.63	-49.99
37.4812	18.53	24.14	24.67	138.13	70.47	9.74	8.68	377.02	816.33	21.76	-49.87
37.4637	18.75	24.15	24.8	126.68	71.47	10.05	9.28	375.75	734.95	21.82	-49.82

37.3603	18.91	24.08	24.85	132.05	72.45	10.97	9.29	377.89	545.77	21.92	-49.72
37.3485	18.5	24.12	24.89	133.57	70.45	10.22	8.99	373.6	339.47	22.05	-49.61
37.399	18.36	24.05	24.85	130.25	70.12	9.89	9.11	366.73	141.28	22.1	-49.55
37.4947	18.55	23.89	24.61	127.43	71.6	11.04	9.18	372.4	5.48	22.22	-49.44
37.4919	18.7	23.78	24.42	122.83	72.85	11.41	9.46	371.22	-1	22.35	-49.32
37.4926	18.44	23.69	24.29	123.63	72	11.52	9.48	368.41	-1	22.48	-49.2

inter-calibration: none
CTD stations: 3
radiosondes: 2
overflights: none

station no.	date / time UTC	device	action	latitude [°N]	longitude [°W]
M161 242	23 feb 2020 / 14:04-14:30	CTD	500m	21°31.580 N	50°04.858' W
M161 243	23 feb 2020 / 17:00-17:25	CTD	500m	21°48.319 N	49°49.763' W
M161 244	23 feb 2020 / 19:53-20:18	CTD	500m	22°04.853 N	49°34.125' W

4. Instrument Status

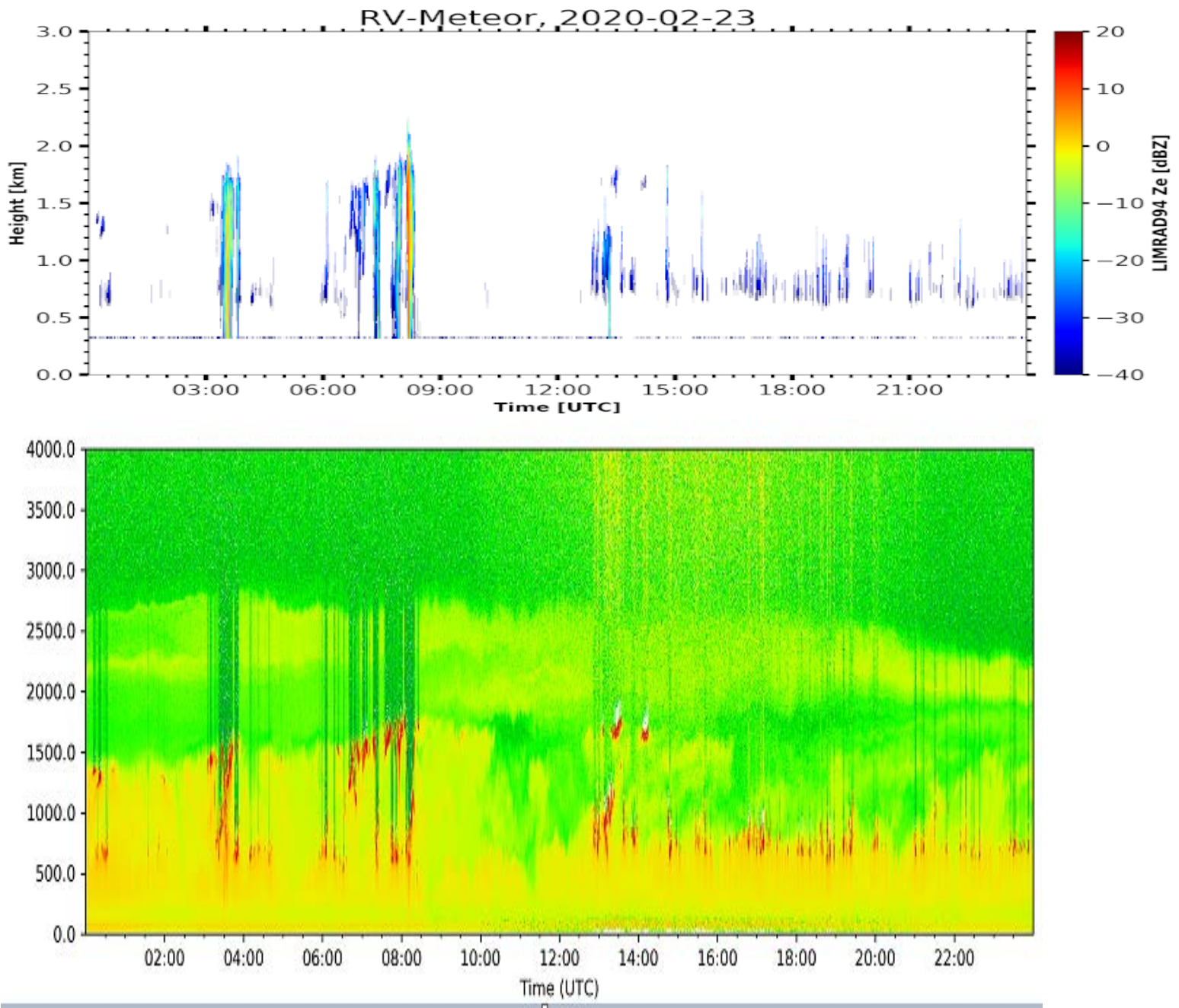
Instrument-Status (**W**-working, **P**-partially-working, **F**-failure, **U**-untested, **R**-ready, **L**-lost, **S**-stopped)

	status	operators
radiosondes	W	Katharina, Imke, Yanmichel, Almuth, Kevin, Sebastian, Geiske
cloud-radar	W	Heike, Johannes
micro-radiometer	W	Heike, Johannes
spect-radiometer	W	Heike, Johannes
Raman-lidar	W	Ludwig
spare cloud-kite	S	Oliver, Marcel, Marcel, Antonio, Robert, Sanola
Picarro	W	Sebastian
micro-biology	S	Wiebke, Jan, Abiel
ADPC ocean curr.	W	Callum, Beth
thermosalinograph	W	Callum, Beth
glider	S	Callum, Beth
UAV	W	Darek, Jakub, Michal, Wojciech
eddy-flux-data	W	Katharina, Imke, Heike
wind-lidar (DTU)	W	Geiske, Kevin
wind-lidar (Bre)	W	Geiske, Kevin
MAX-DOAS	W	Alma
ceilometer	W	Stefan
cloud camera	W	Stefan
sunphotometer	W	Stefan, Przemek, Andreas, John, Sanola

aero scat/abs			W	Przemek (Mr P)
WRAS (aero size)			W	Alma
CTD			W	Darek, Przemek, Beth, Callum, Alma, Sanola, Kevin, Robert, Wojtek, Almuth
Rodney			R	Darek, Jakub, Przemek

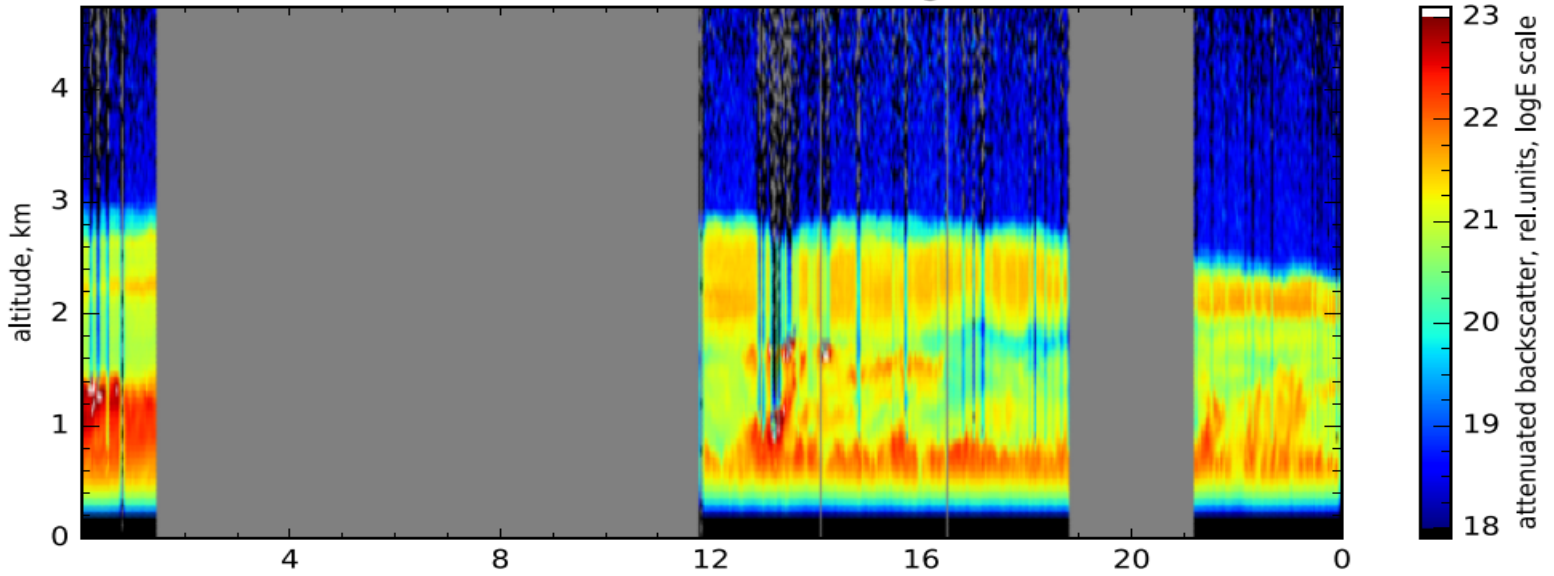
5. Outlook

Tomorrow will be another NE-direction transit leg with a few stops for UAV flights and CTD casts.

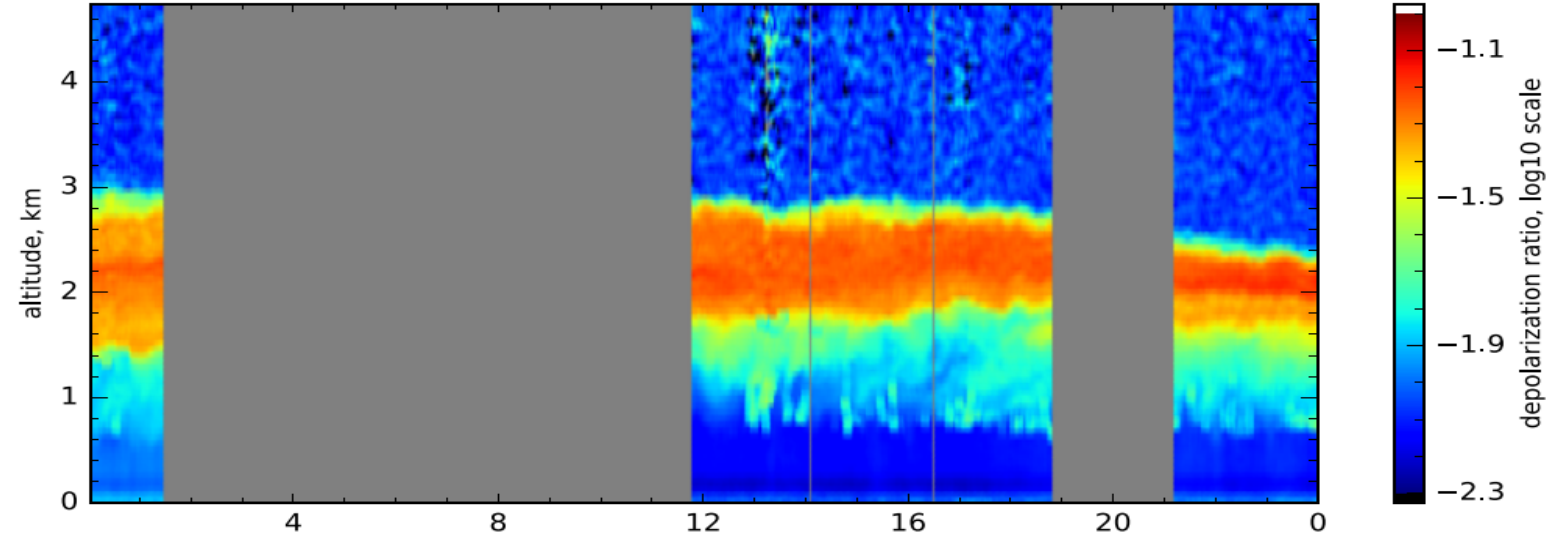


METEOR radar (top) and ceilometer (bottom) on Feb 23
 (distinct dust layer between 2 and 3km – decreasing in strength during the day)

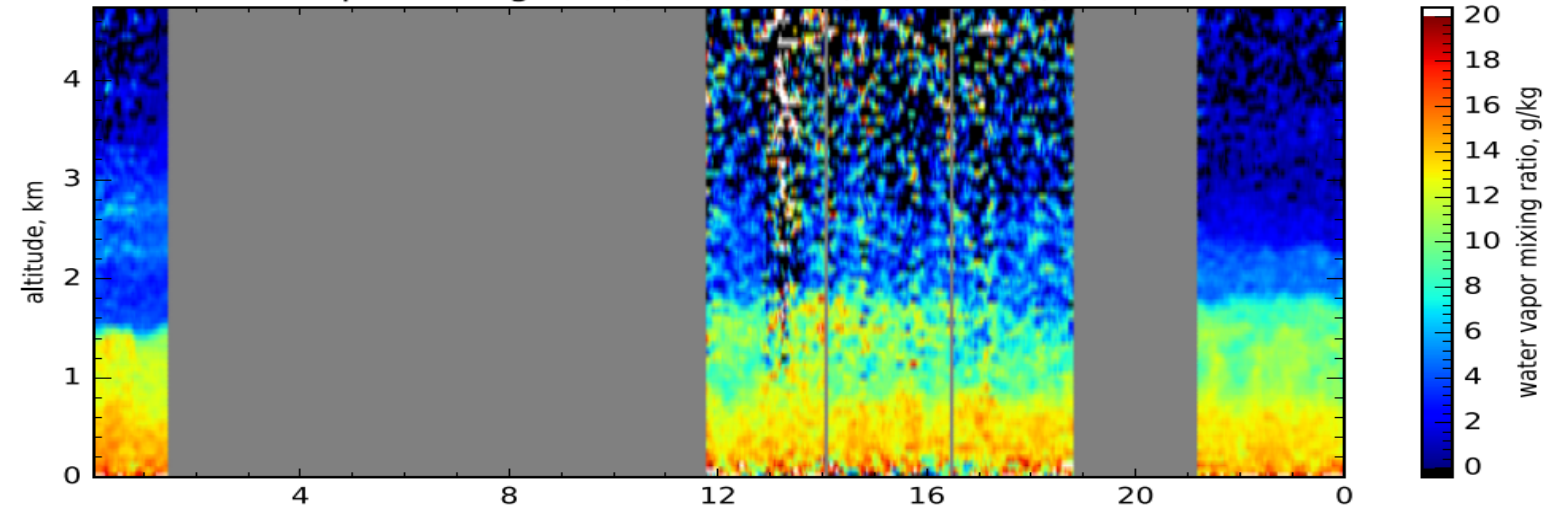
attenuated backscatter, 1064nm, near range, res.: 120s, 60m



Volume linear depol. ratio, 532nm, near range, res.: 600s, 60m-180m

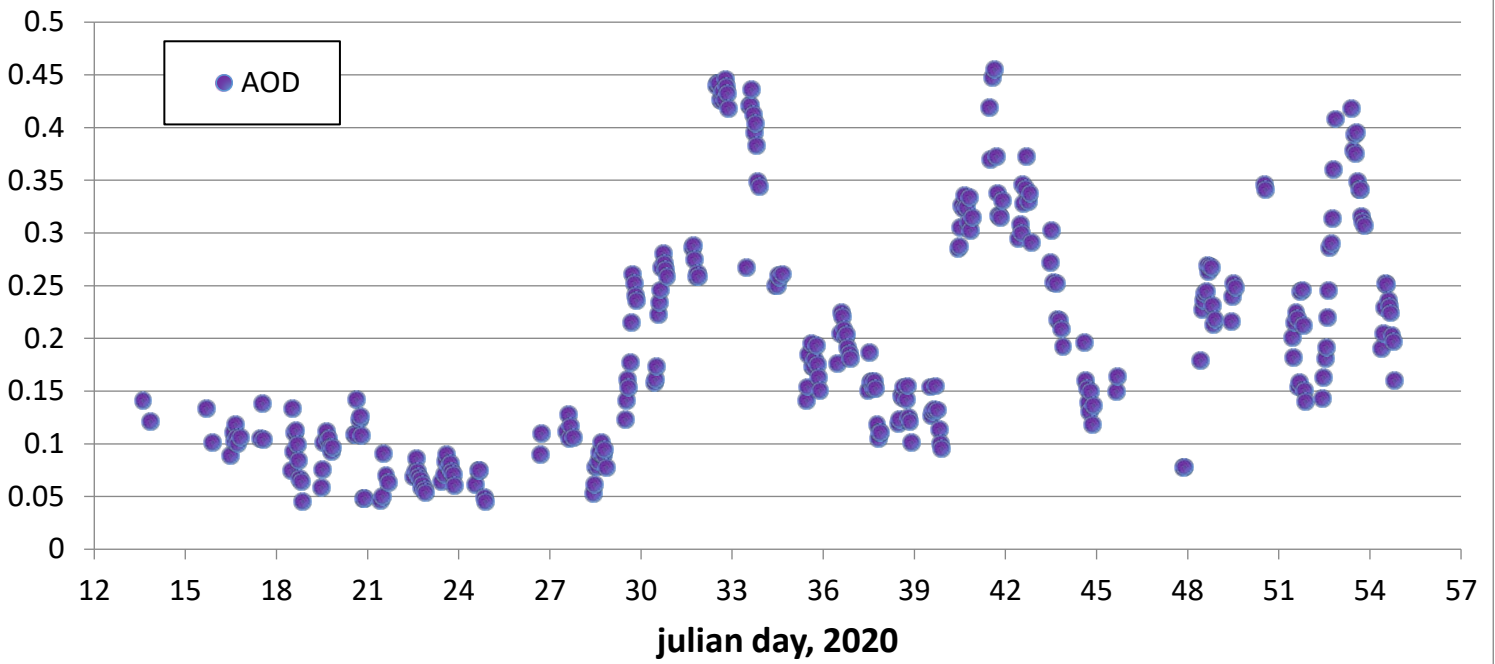


Water vapor mixing ratio, FAR+NEAR, res.: 600s, 60m-180m

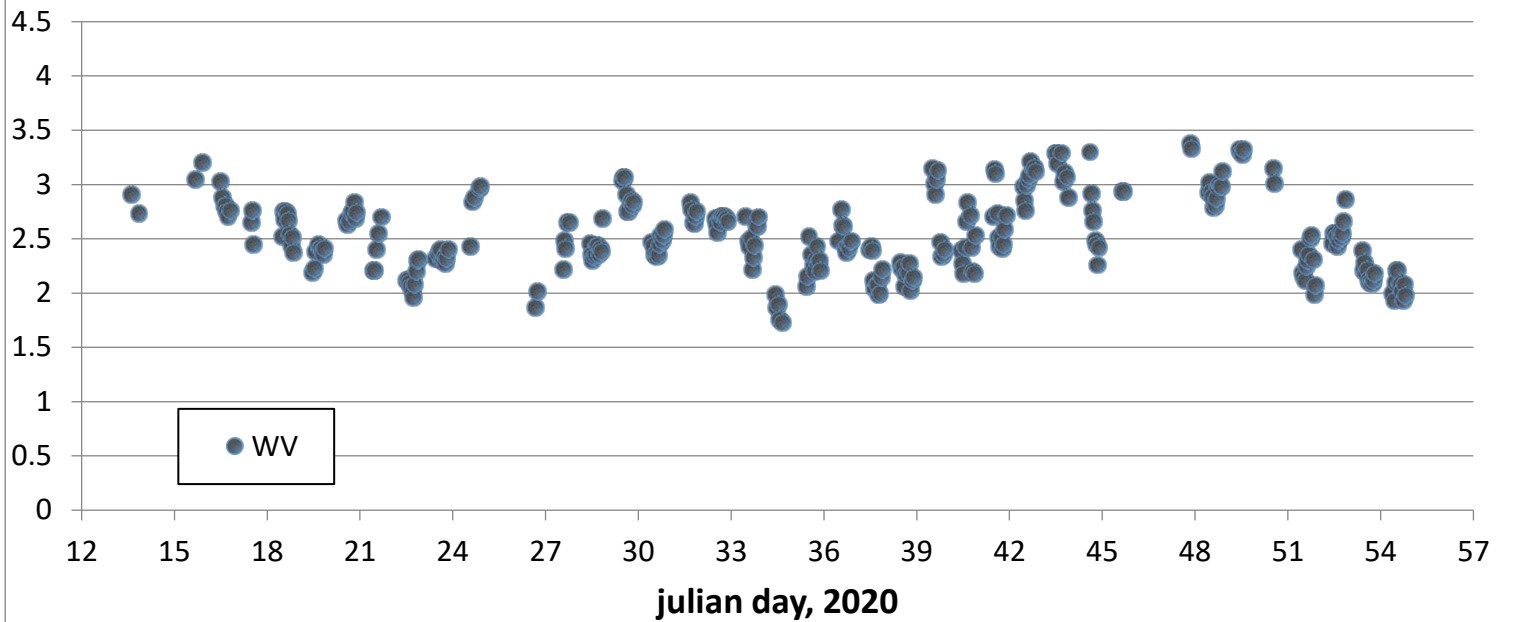


RAMAN lidar measurements during Feb 23

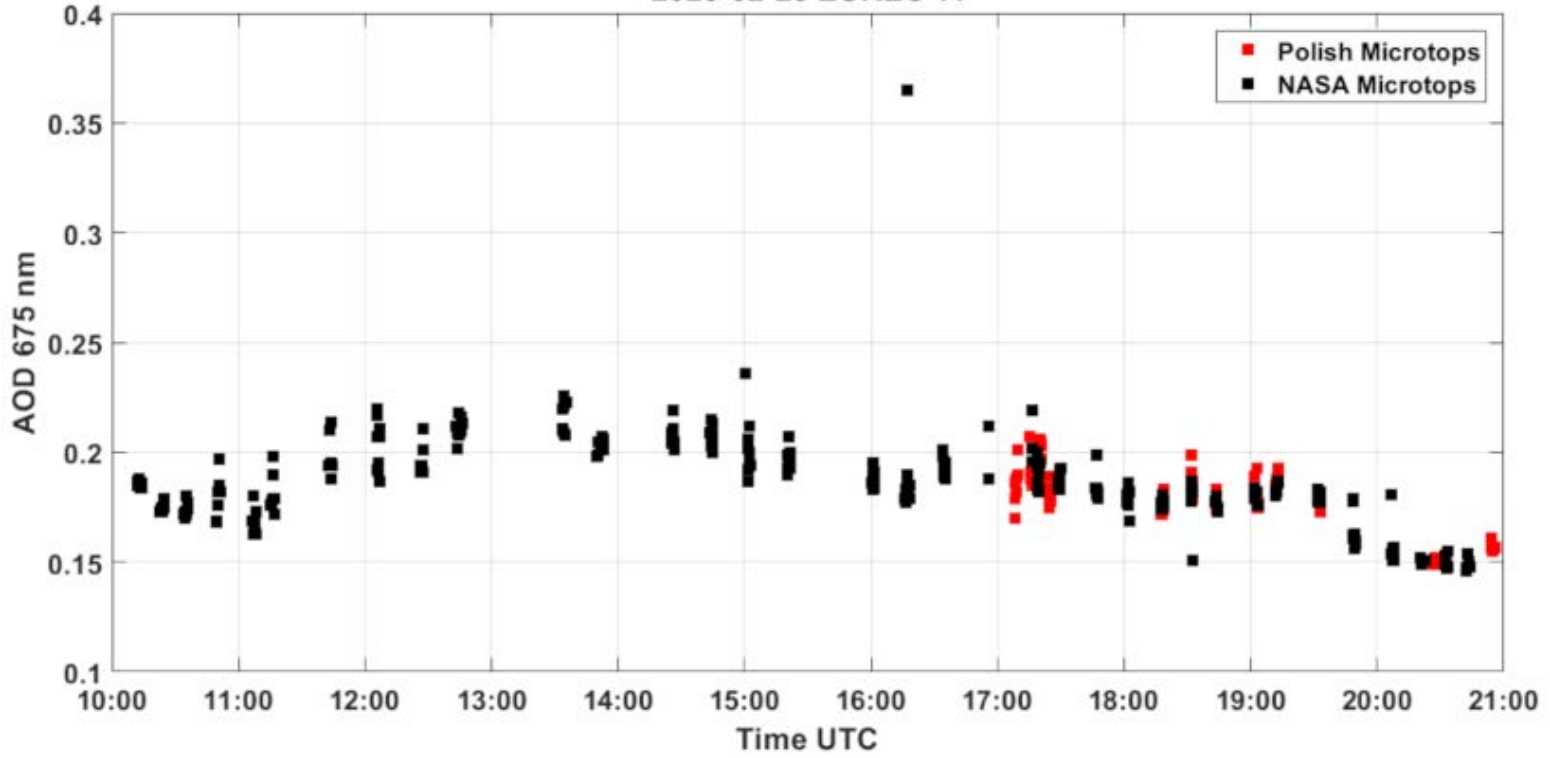
AOD (550nm)



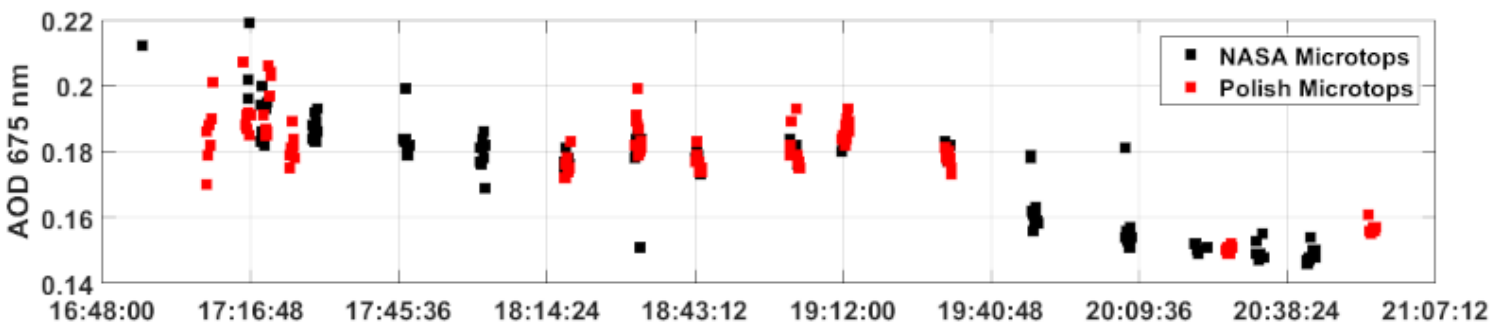
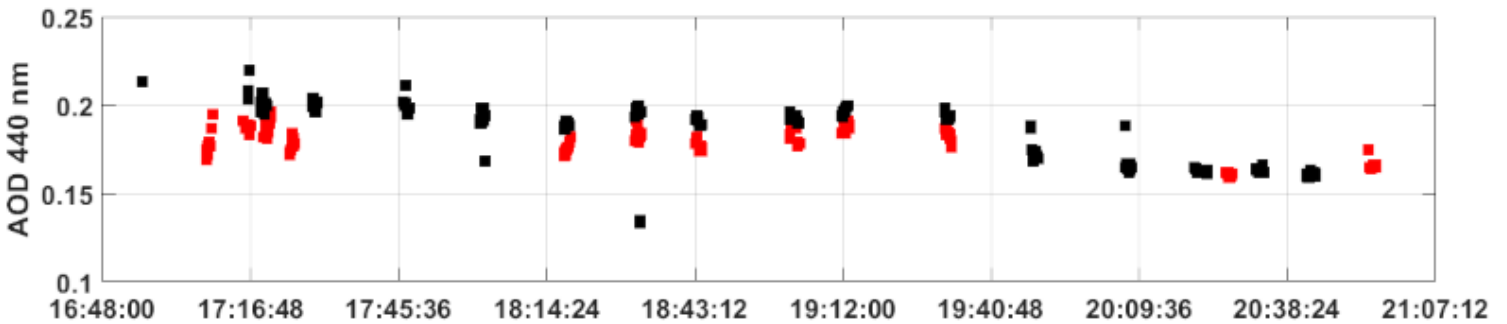
water vapor (g/cm2)



2020-02-23 EUREC⁴A



MICROTOPS measurements during Feb 23 ...AOD, 675nm - comparisons of two different MICROTOPS



MICROTOPS measurements during Feb 23 ...AOD, 440nm and AOD, 675nm comparisons