



Flight Plan for: 25 March 2021

HALO

Take Off: 07:30 UTC
Duration: 06:46 (7) Hours

Pilots: ??
??

Crew:

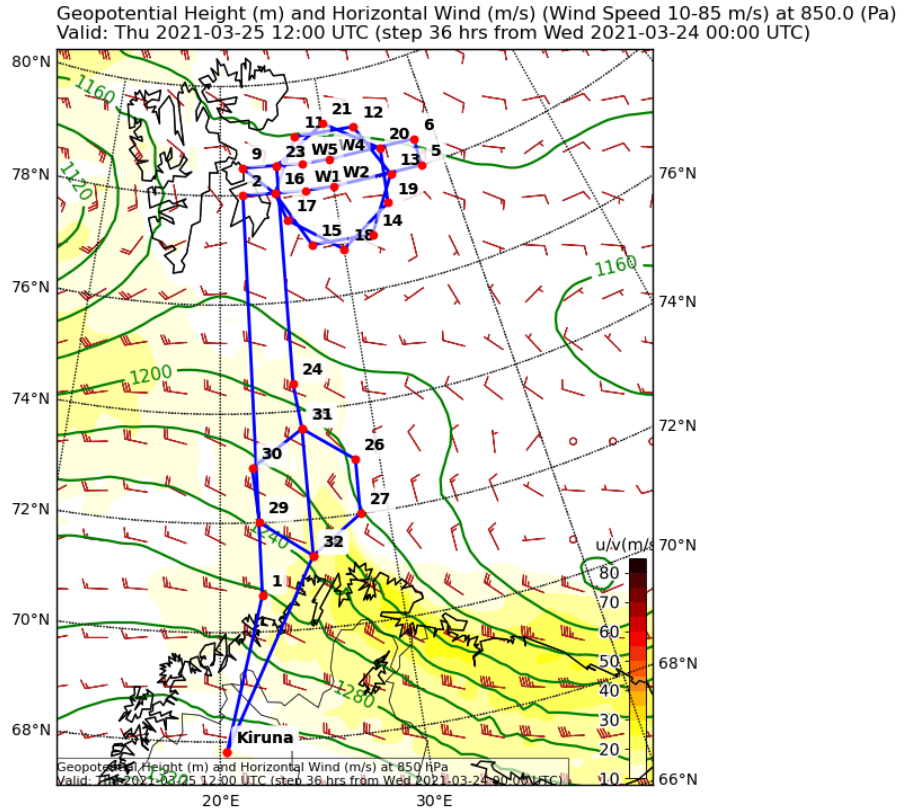
Mission PI	Roel Neggers
WALES	??
HAMP	??
Specmacs	??
Smart/Velox	??
Dropsonde	Martina Polito
Service	??

Waypoints:

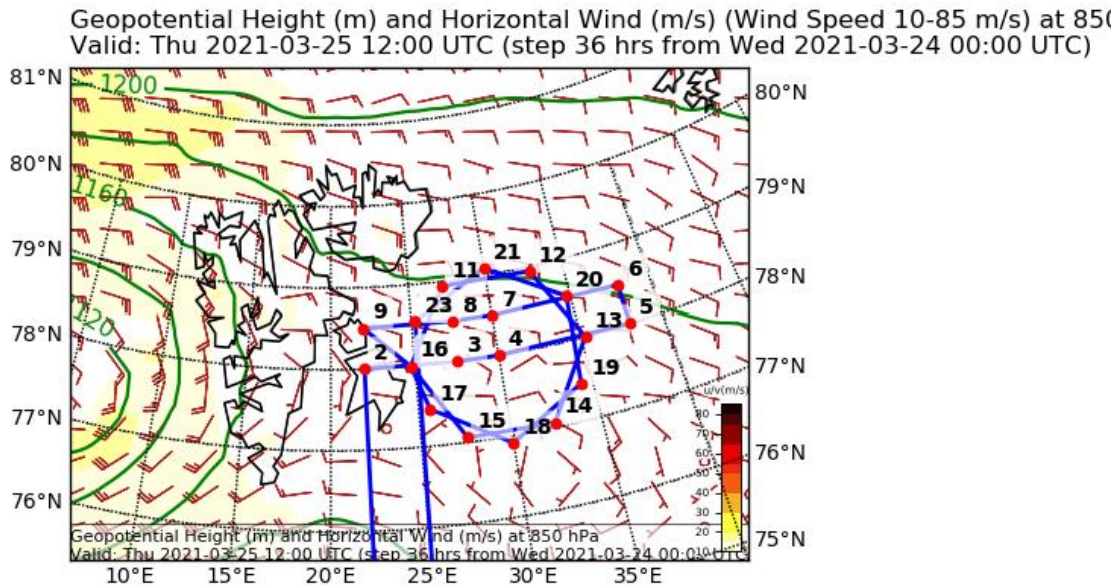
W0	67.821	20.336 Kiruna	W17	77.500	25.667
W1	70.667	22.333	W18	76.833	30.000
W2	78.000	22.000	W19	77.500	34.333
W3	78.000	27.500 W1	W20	78.500	34.833
W4	78.000	30.000 W2	W21	79.167	30.000
W5	78.000	38.000	W22	78.500	25.167
W6	78.500	38.000	W23	78.500	25.167
W7	78.500	30.000 W4	W24	74.500	25.000
W8	78.500	27.500 W5	W25	73.667	25.333
W9	78.500	22.000	W26	73.000	28.500
W10	78.000	24.833	W27	72.000	28.333
W11	79.000	27.167	W28	71.333	25.333
W12	79.000	32.833	W29	72.000	22.333
W13	78.000	35.167	W30	73.000	22.000
W14	77.000	32.500	W31	73.667	25.333
W15	77.000	27.500	W32	71.333	25.333
W16	78.000	24.833	W33	67.821	20.336 Kiruna



General Overview



Detailed Map:





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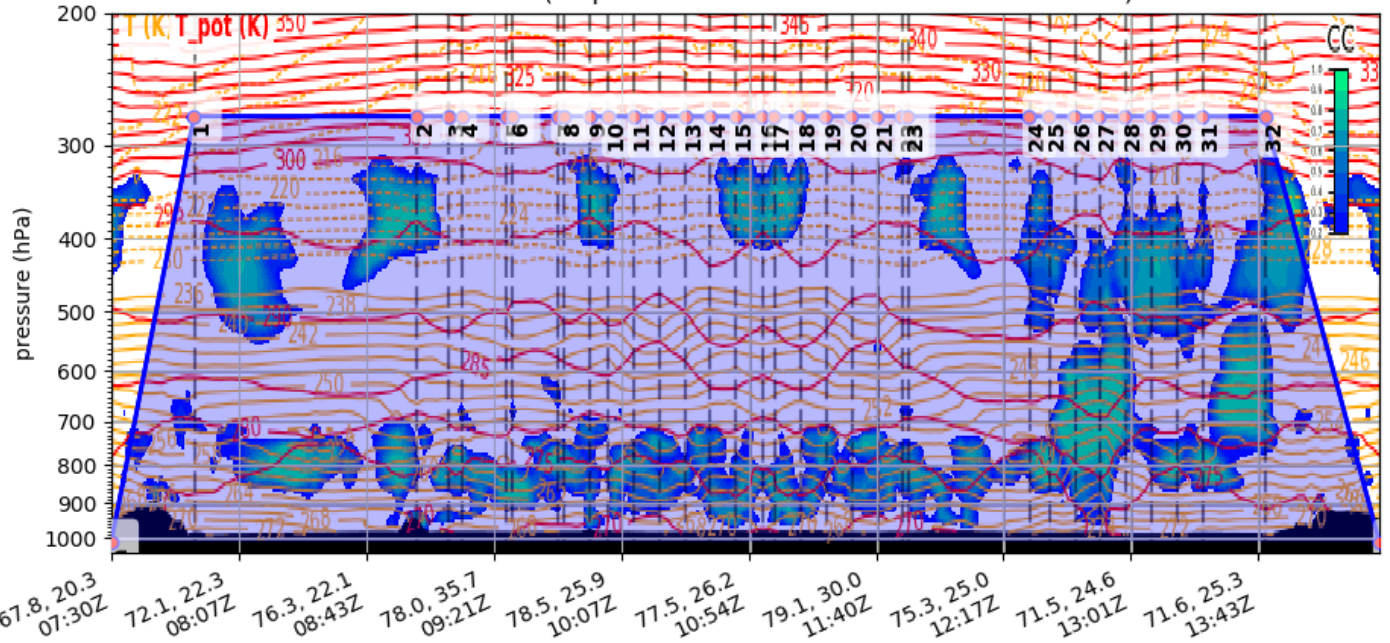
HALO

	Location	Lat (+-90)	Lon (+-180)	Flightlevel	Pressure (hPa)	Leg dist. (km [nm])	Cum. dist. (km [nm])	Leg time	Cum. time	Time (UTC)
0	Kiruna	67,82	20,34	0	1.013,25	0 [0]	0 [0]	00:00:00	00:00:00	2021-03-25 07:30:52
1		70,59	22,34	320	274,49	318 [172]	318 [172]	00:24:08	00:24:08	2021-03-25 07:55:00
2		78	22	320	274,49	827 [446]	1146 [618]	01:02:41	01:26:49	2021-03-25 08:57:41
3		78	27,5	320	274,49	127 [68]	1273 [687]	00:09:40	01:36:30	2021-03-25 09:07:22
4		78	30	320	274,49	58 [31]	1331 [719]	00:04:23	01:40:54	2021-03-25 09:11:46
5		78	38	320	274,49	185 [100]	1517 [819]	00:14:03	01:54:57	2021-03-25 09:25:49
6		78,5	38	320	274,49	55 [30]	1573 [849]	00:04:13	01:59:11	2021-03-25 09:30:03
7		78,5	30	320	274,49	177 [96]	1751 [945]	00:13:29	02:12:40	2021-03-25 09:43:32
8		78,5	27,5	320	274,49	55 [30]	1806 [975]	00:04:13	02:16:53	2021-03-25 09:47:45
9		78,5	22	320	274,49	122 [66]	1929 [1041]	00:09:16	02:26:10	2021-03-25 09:57:02
10		78	24,75	320	274,49	83 [45]	2013 [1086]	00:06:21	02:32:31	2021-03-25 10:03:23
11		78,94	27,16	320	274,49	118 [63]	2131 [1150]	00:08:57	02:41:29	2021-03-25 10:12:21
12		78,94	32,84	320	274,49	121 [65]	2253 [1216]	00:09:13	02:50:42	2021-03-25 10:21:34
13		78	35,25	320	274,49	118 [63]	2371 [1280]	00:08:57	02:59:40	2021-03-25 10:30:32
14		77,06	32,43	320	274,49	125 [67]	2496 [1348]	00:09:29	03:09:10	2021-03-25 10:40:02
15		77,06	27,57	320	274,49	121 [65]	2618 [1413]	00:09:13	03:18:24	2021-03-25 10:49:16
16		78	24,75	320	274,49	125 [67]	2744 [1481]	00:09:29	03:27:54	2021-03-25 10:58:46
17		77,45	25,65	320	274,49	64 [34]	2808 [1516]	00:04:53	03:32:47	2021-03-25 11:03:39
18		76,91	30	320	274,49	123 [66]	2932 [1583]	00:09:22	03:42:09	2021-03-25 11:13:02
19		77,45	34,35	320	274,49	123 [66]	3056 [1650]	00:09:22	03:51:32	2021-03-25 11:22:24
20		78,55	34,76	320	274,49	122 [65]	3178 [1716]	00:09:15	04:00:47	2021-03-25 11:31:39
21		79,09	30	320	274,49	119 [64]	3297 [1780]	00:09:03	04:09:51	2021-03-25 11:40:43
22		78,55	25,24	320	274,49	119 [64]	3417 [1845]	00:09:03	04:18:55	2021-03-25 11:49:47
23		78,55	25,24	320	274,49	0 [0]	3417 [1845]	00:00:00	04:18:55	2021-03-25 11:49:47
24		74,46	24,96	320	274,49	456 [246]	3873 [2091]	00:34:33	04:53:28	2021-03-25 12:24:20
25		73,59	25,31	320	274,49	97 [52]	3971 [2144]	00:07:23	05:00:52	2021-03-25 12:31:44
26		73,05	28,55	320	274,49	120 [64]	4091 [2209]	00:09:07	05:09:59	2021-03-25 12:40:51
27		71,95	28,36	320	274,49	121 [65]	4213 [2275]	00:09:14	05:19:13	2021-03-25 12:50:05
28		71,41	25,31	320	274,49	123 [66]	4336 [2341]	00:09:19	05:28:33	2021-03-25 12:59:25
29		71,95	22,26	320	274,49	123 [66]	4459 [2407]	00:09:19	05:37:53	2021-03-25 13:08:45
30		73,05	22,07	320	274,49	121 [65]	4581 [2473]	00:09:14	05:47:07	2021-03-25 13:17:59
31		73,59	25,31	320	274,49	120 [64]	4701 [2538]	00:09:07	05:56:14	2021-03-25 13:27:06
32		71,41	25,31	320	274,49	243 [131]	4945 [2670]	00:18:26	06:14:40	2021-03-25 13:45:32
33	Kiruna	67,82	20,34	0	1.013,25	444 [239]	5389 [2910]	00:33:39	06:48:20	2021-03-25 14:19:12

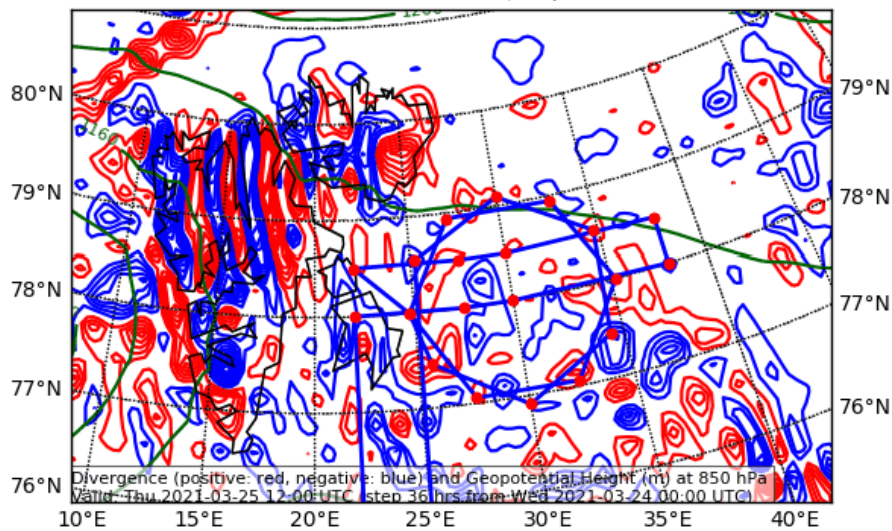


Additional Maps:

Cloud Cover (0-1) Vertical Section
 Valid: Thu 2021-03-25 12:00 UTC (step 36 hrs from Wed 2021-03-24 00:00 UTC)



Divergence and Geopotential Height (m) at 850.0 (Pa)
 Valid: Thu 2021-03-25 12:00 UTC (step 36 hrs from Wed 2021-03-24 00:00 UTC)

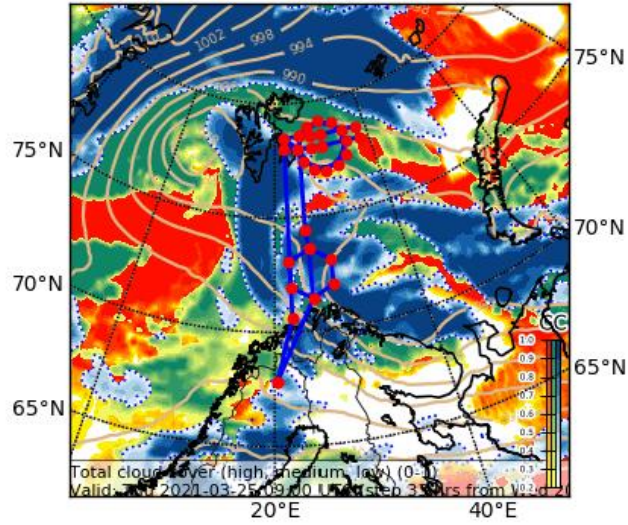




Additional Maps:

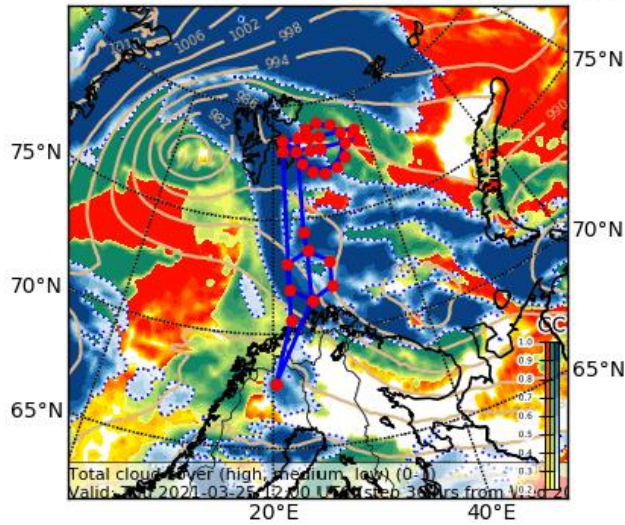
Cloud Cover (0-1) (Total Cloud Cover)

Valid: Thu 2021-03-25 09:00 UTC (step 33 hrs from Wed 2021-03-24 00:00)



Cloud Cover (0-1) (Total Cloud Cover)

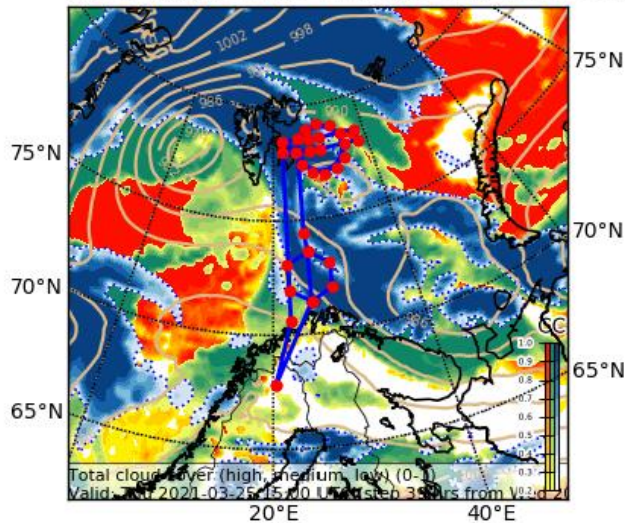
Valid: Thu 2021-03-25 12:00 UTC (step 36 hrs from Wed 2021-03-24 00:00)



EPSG:77774020

Cloud Cover (0-1) (Total Cloud Cover)

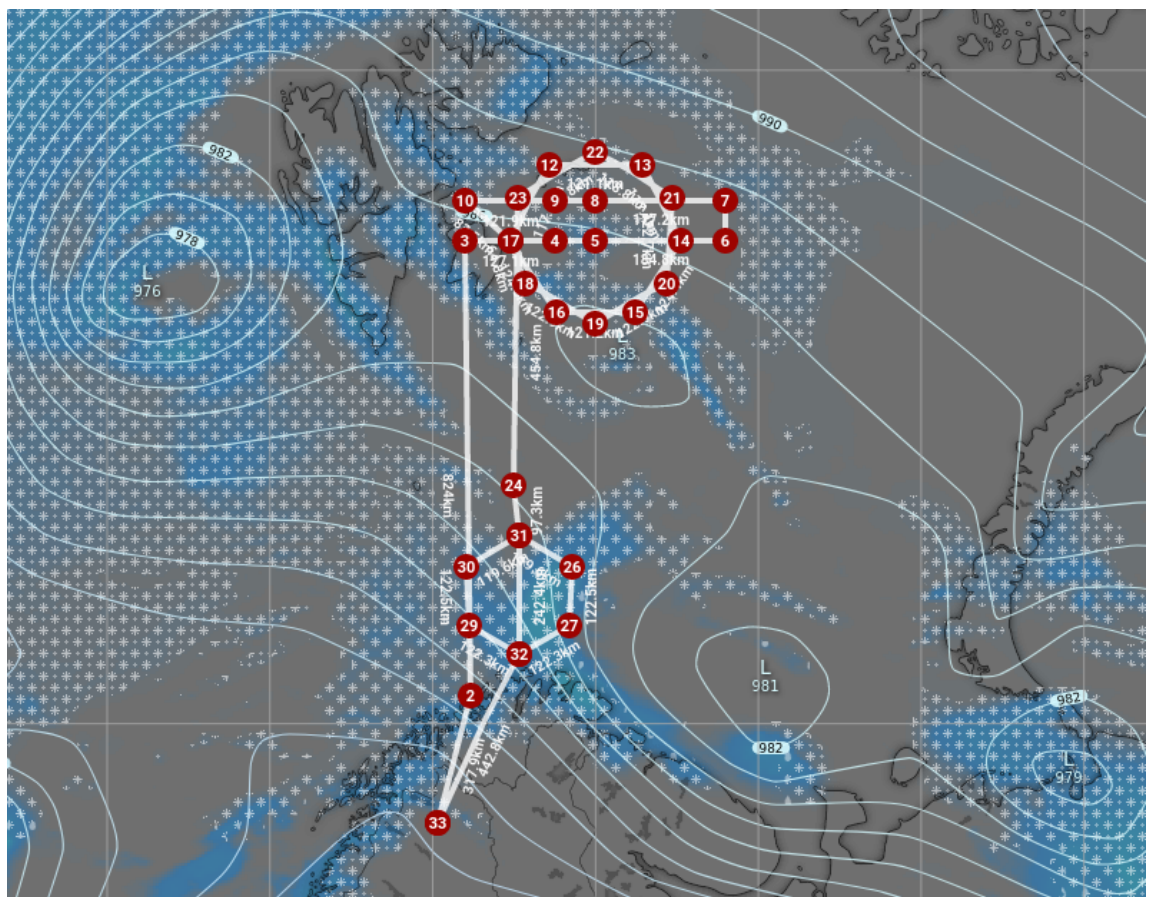
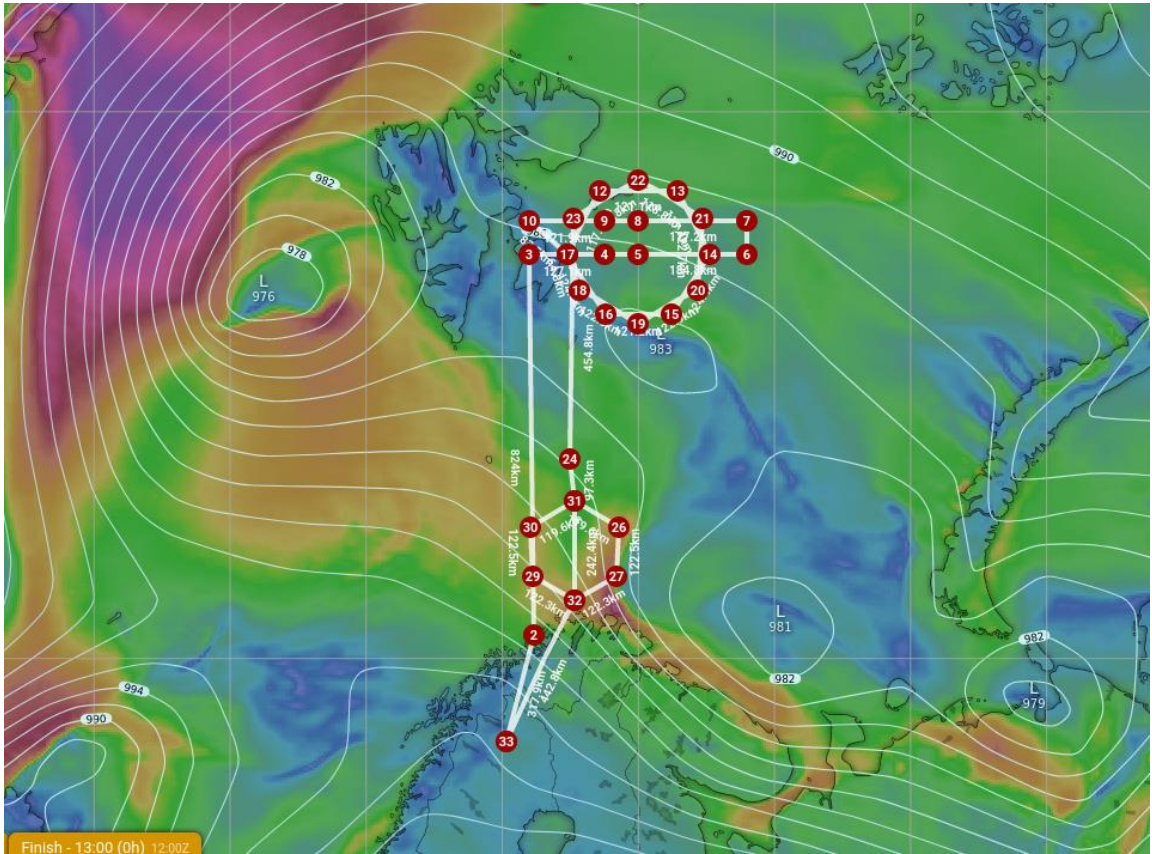
Valid: Thu 2021-03-25 15:00 UTC (step 39 hrs from Wed 2021-03-24 00:00)



EPSG:77774020



Additional Maps:

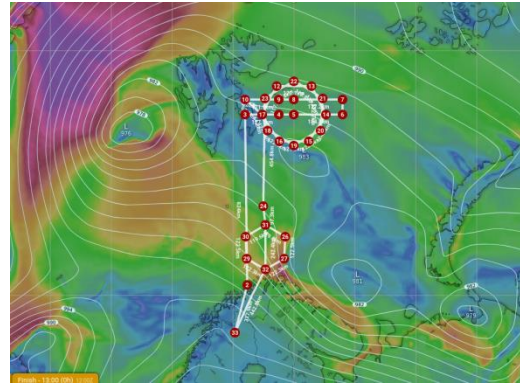




Objectives of the Flight:

- To perform collocated measurements with the P5 and P6 of low clouds over the sea ice east of Svalbard. HALO will fly overhead of P5 and P6 between waypoints 3-4 and 7-8.
- To fly two mesoscale circles in the same area, one clockwise and one counterclockwise, to measure divergence profiles. 12 dropsondes will be released on each circle. The vertically pointing instruments onboard HALO will provide further information on cloud and radiative properties in the wider area, which helps in interpreting the P5 and P6 measurements
- To fly a 3d circle on the way back to Kiruna, in the area north of the North Cape. The purpose is to sample the inflow area of the low pressure system located at (40E, 71N). The dropsondes will provide information on vertical structure and horizontal transport, while the radar will give insight into strong snowfall expected in the area.

General Weather Situation:



ECMWF Surface Pressure and Wind field.

A strong low pressure system is situated in the Fram Strait, while secondary lows are situated east of Scandinavia and south of Nova Zembla. The low east of Scandinavia is predicted to slowly move eastward during the day. The conditions are quite stable as predicted by all models. ICON and ECMWF differ somewhat concerning the depth of the cloud layer in the target area east of Svalbard. The low level flow field in that target area is relatively homogeneous.

Take-off conditions in Kiruna are good, while some uncertainty exists about the conditions at LYB.