Weather Information

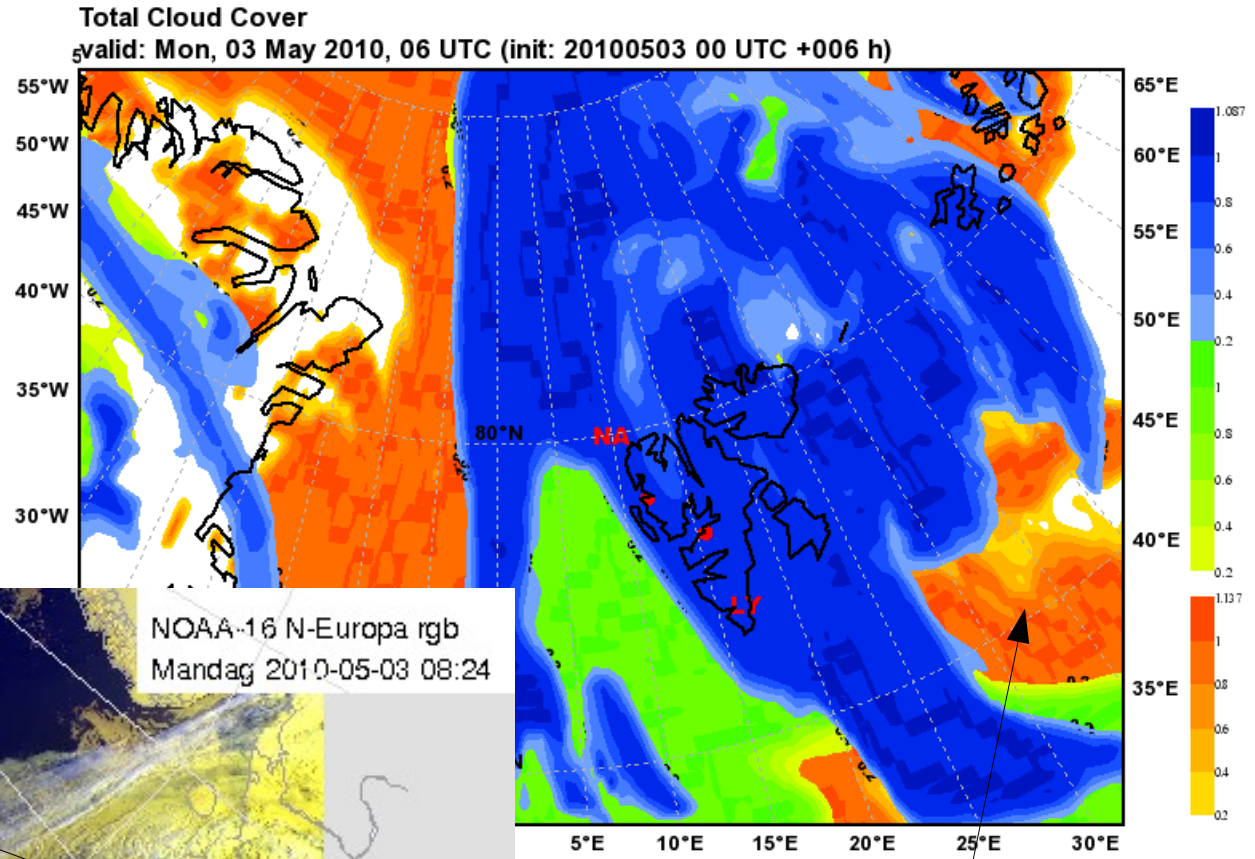
Monday May 03, 2010

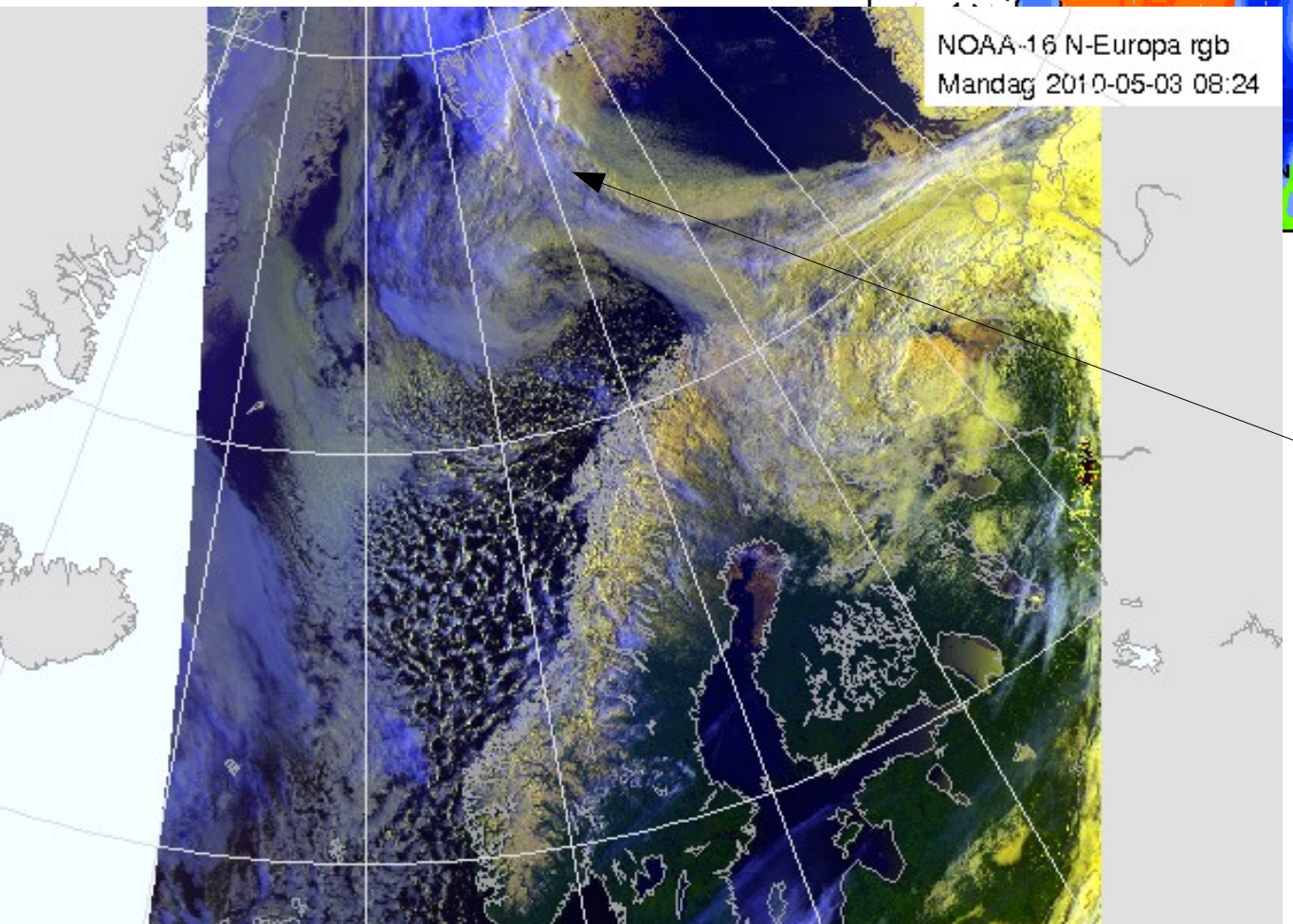
Marc Rautenhaus, DLR/IPA

DLR ECMWF

Satellite vs. ECMWF clouds

06 UTC (08 local)
08:24 local





Low level clouds we'd like to target.

TAF

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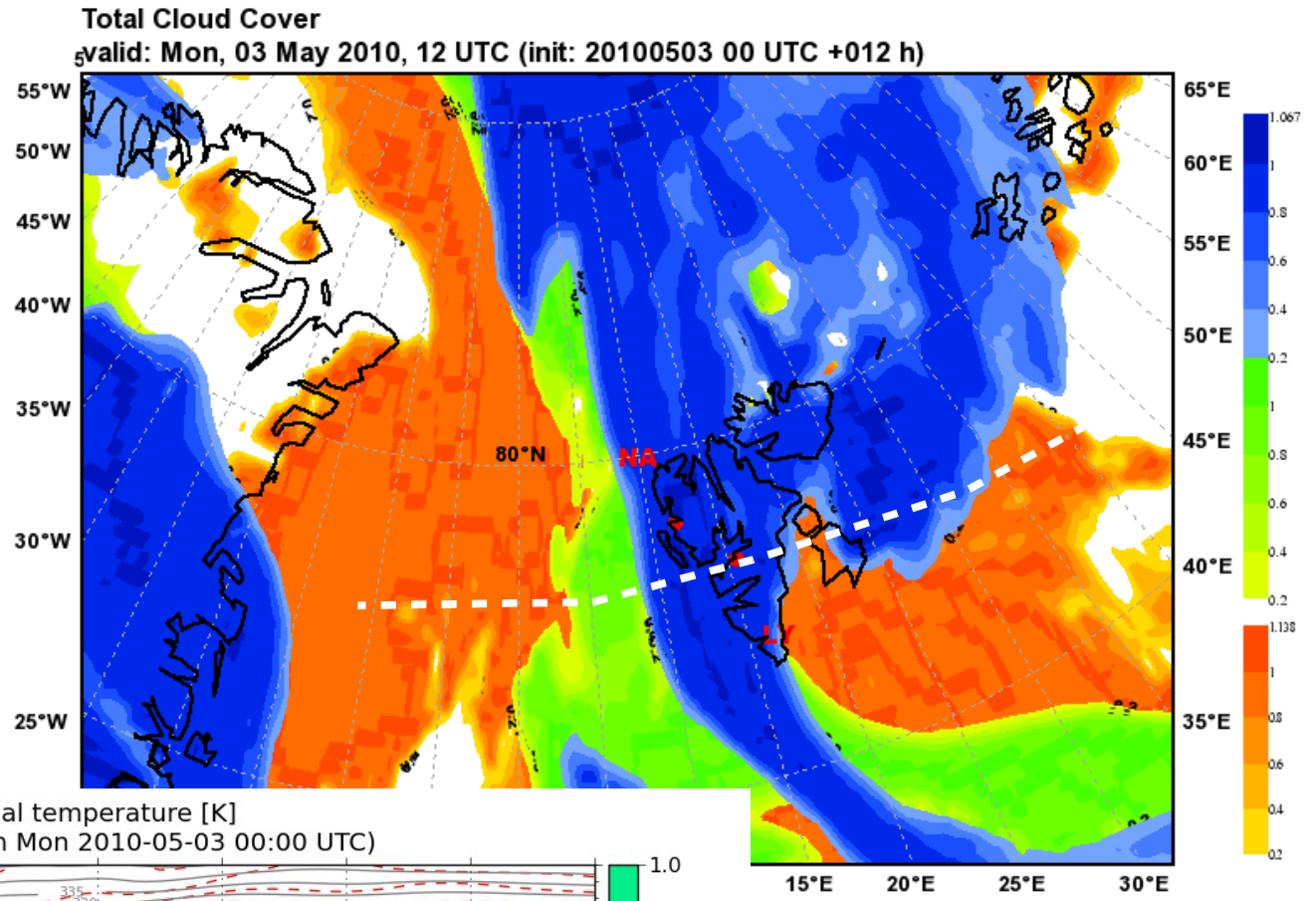
>>> ENSB (SVALBARD/LONGYEAR) <<<

METAR 030650Z 11011KT 9999 -SN FEW010 SCT020 BKN035 M03/M05 Q1016 RMK
      WIND 1400FT 09016KT

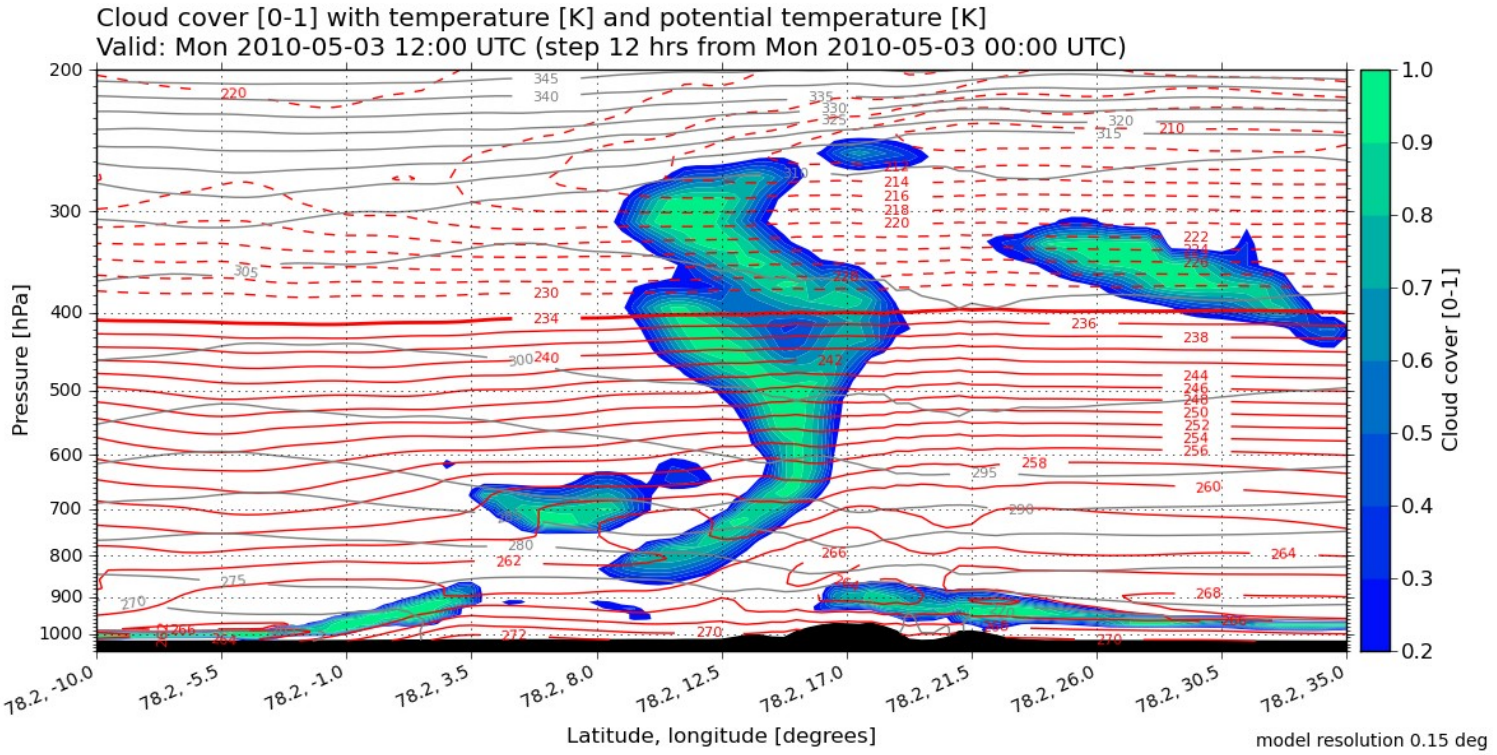
TAF 030500Z 0306/0406 11015KT 9999 FEW012 BKN030 TEMPO 0306/0312
         11025KT 4000 -SN VV012
```

Problem: Danger of icing in the area. When is takeoff possible?

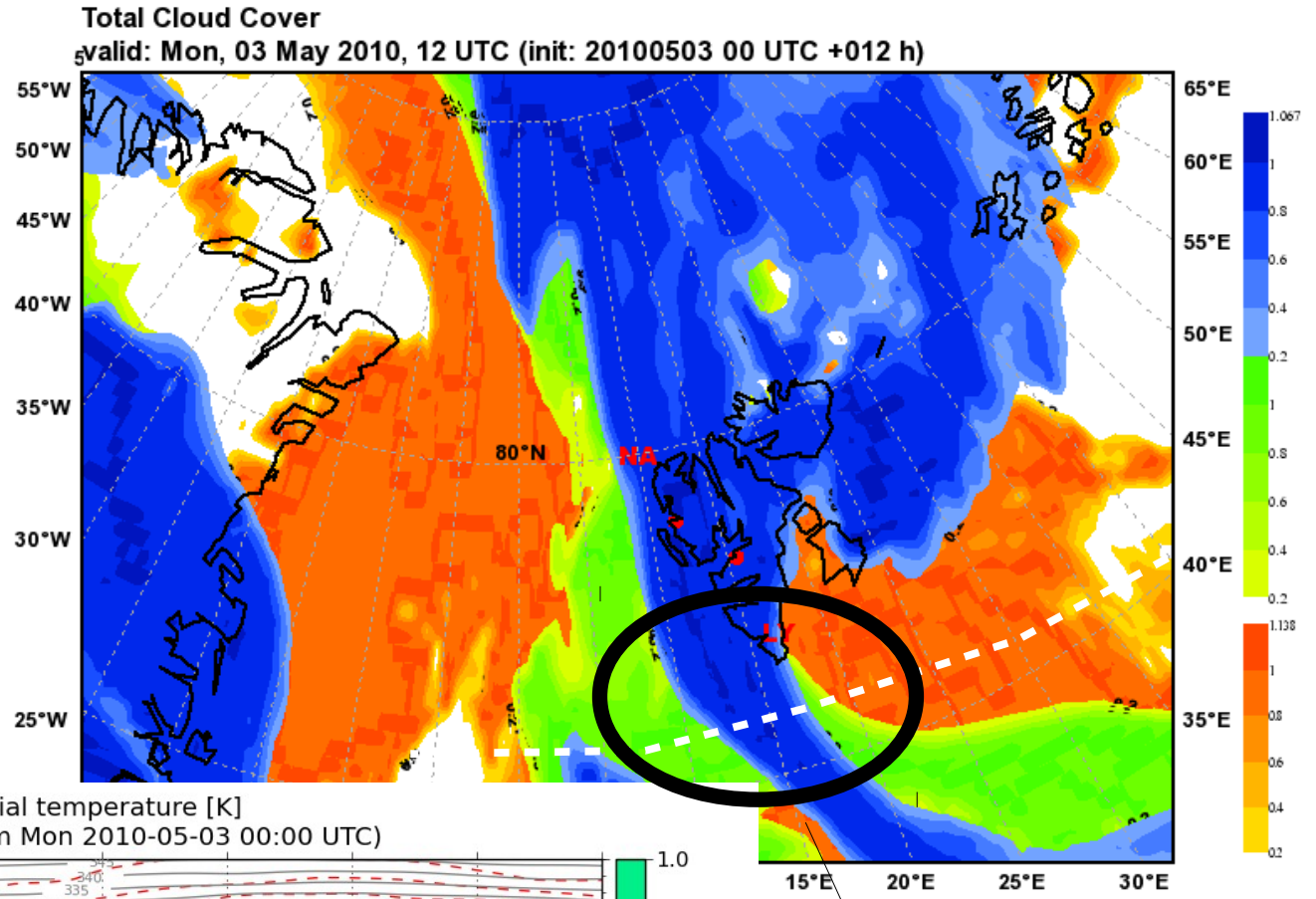
Forecasted situation at 12 UTC (14 local)



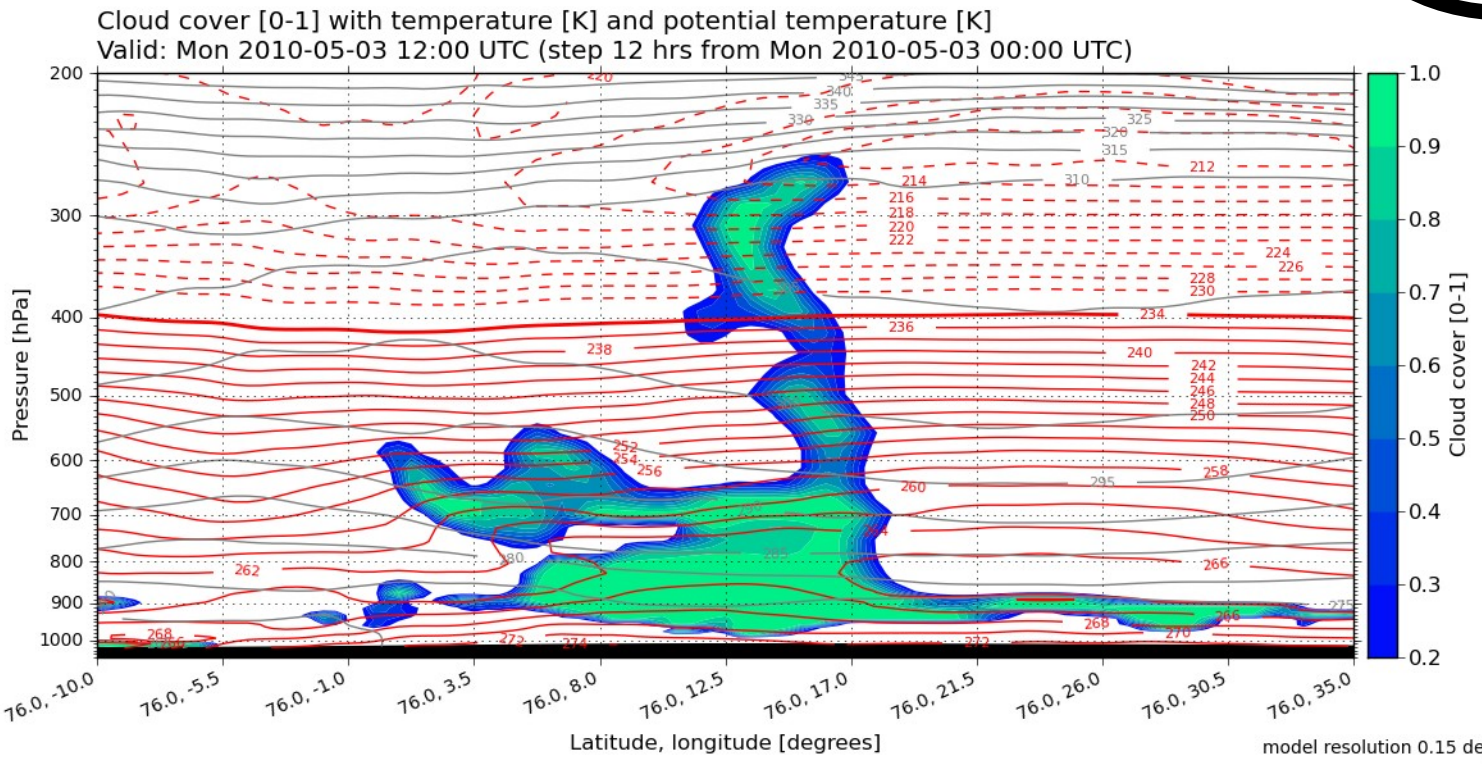
E-W along 78.22N



DLR ECMWF

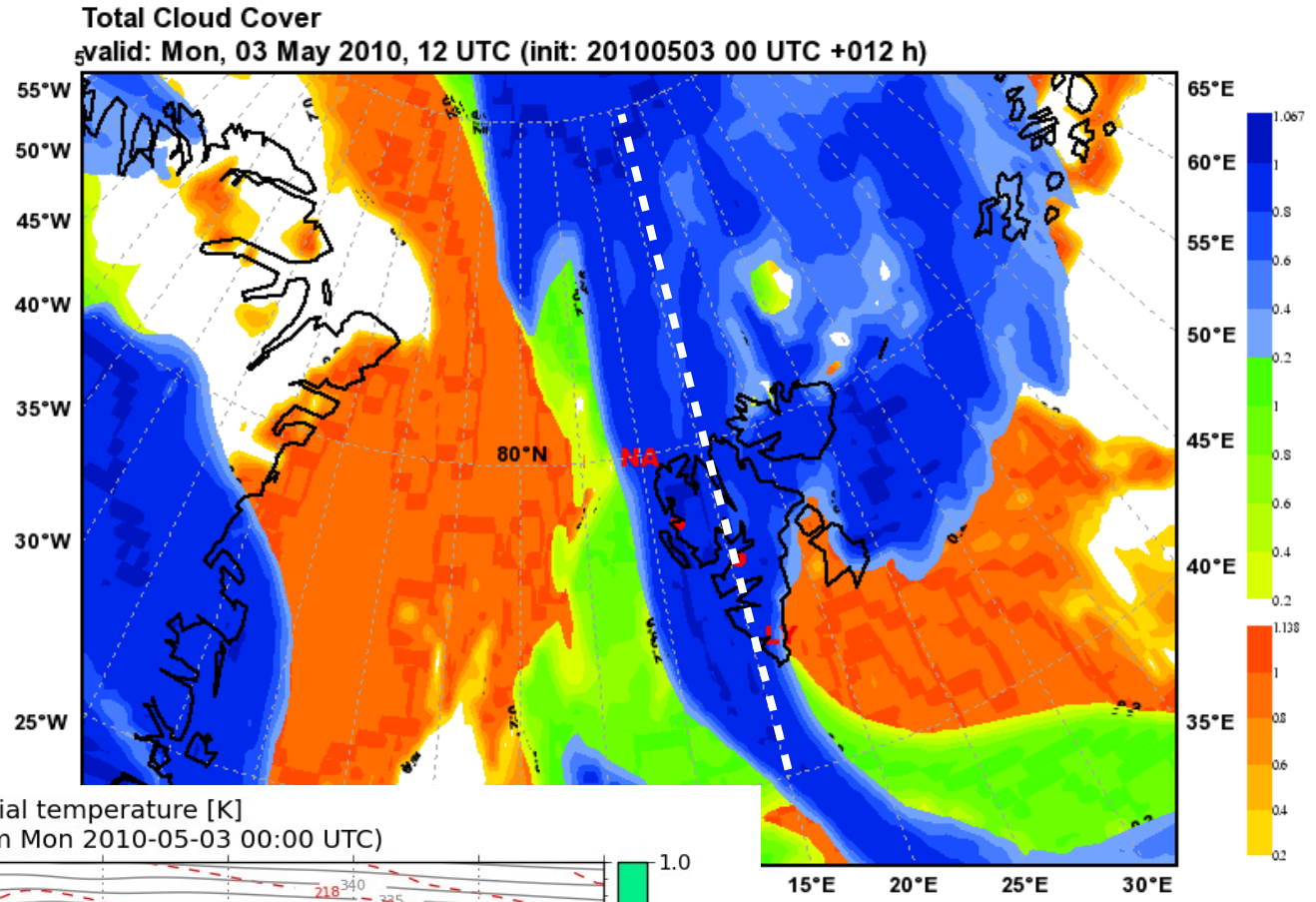


E-W along 76N

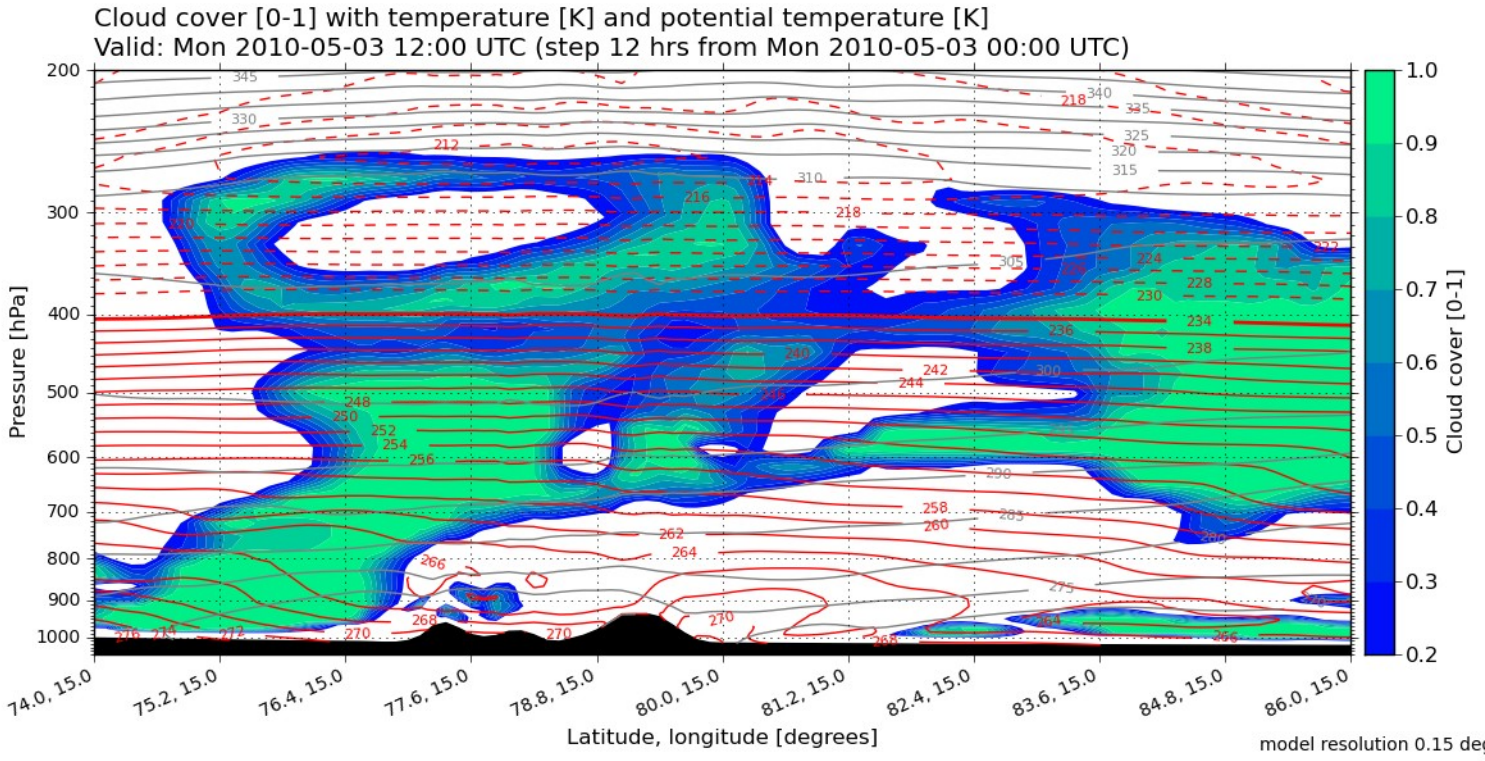


Avoid this area!

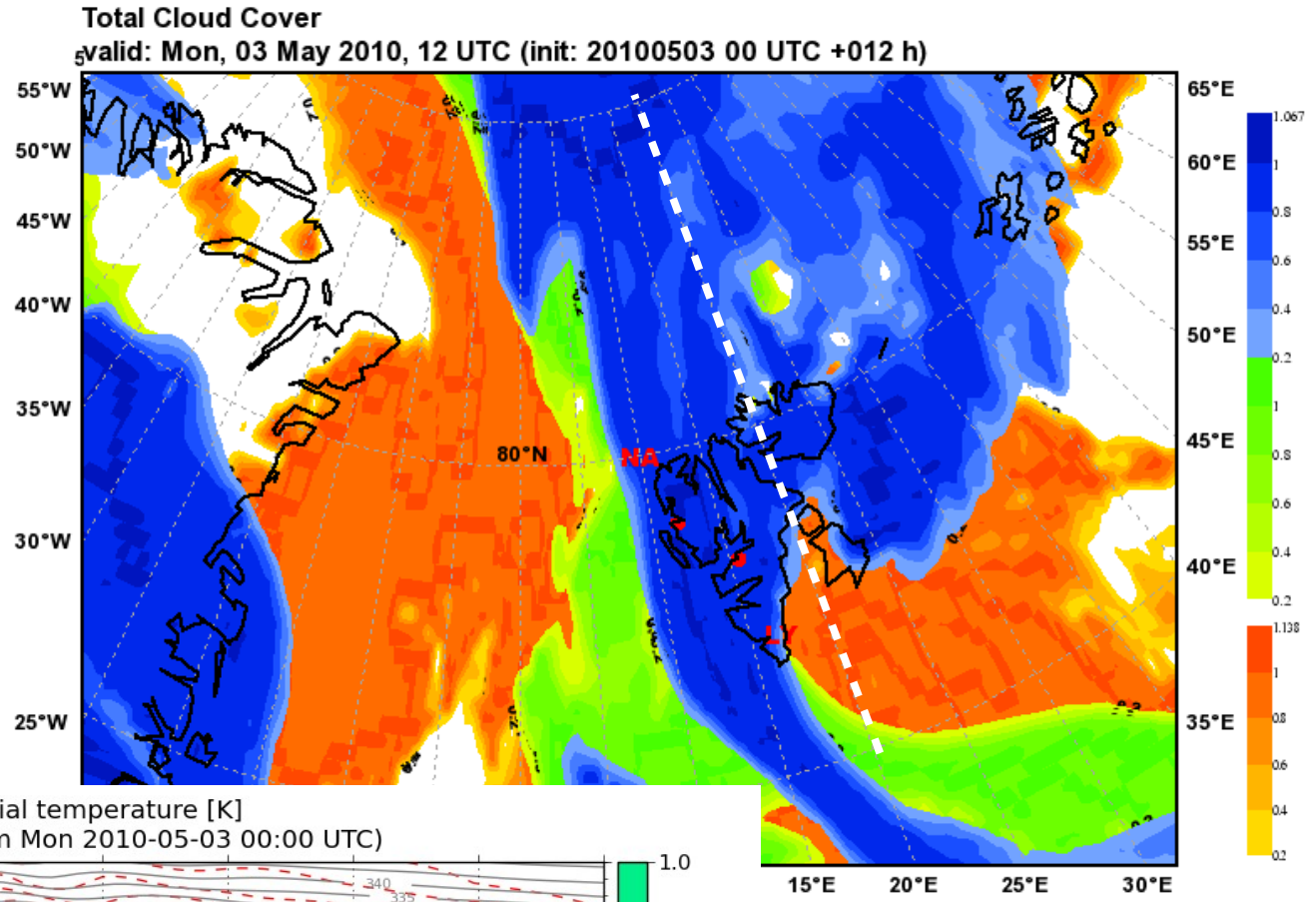
DLR ECMWF



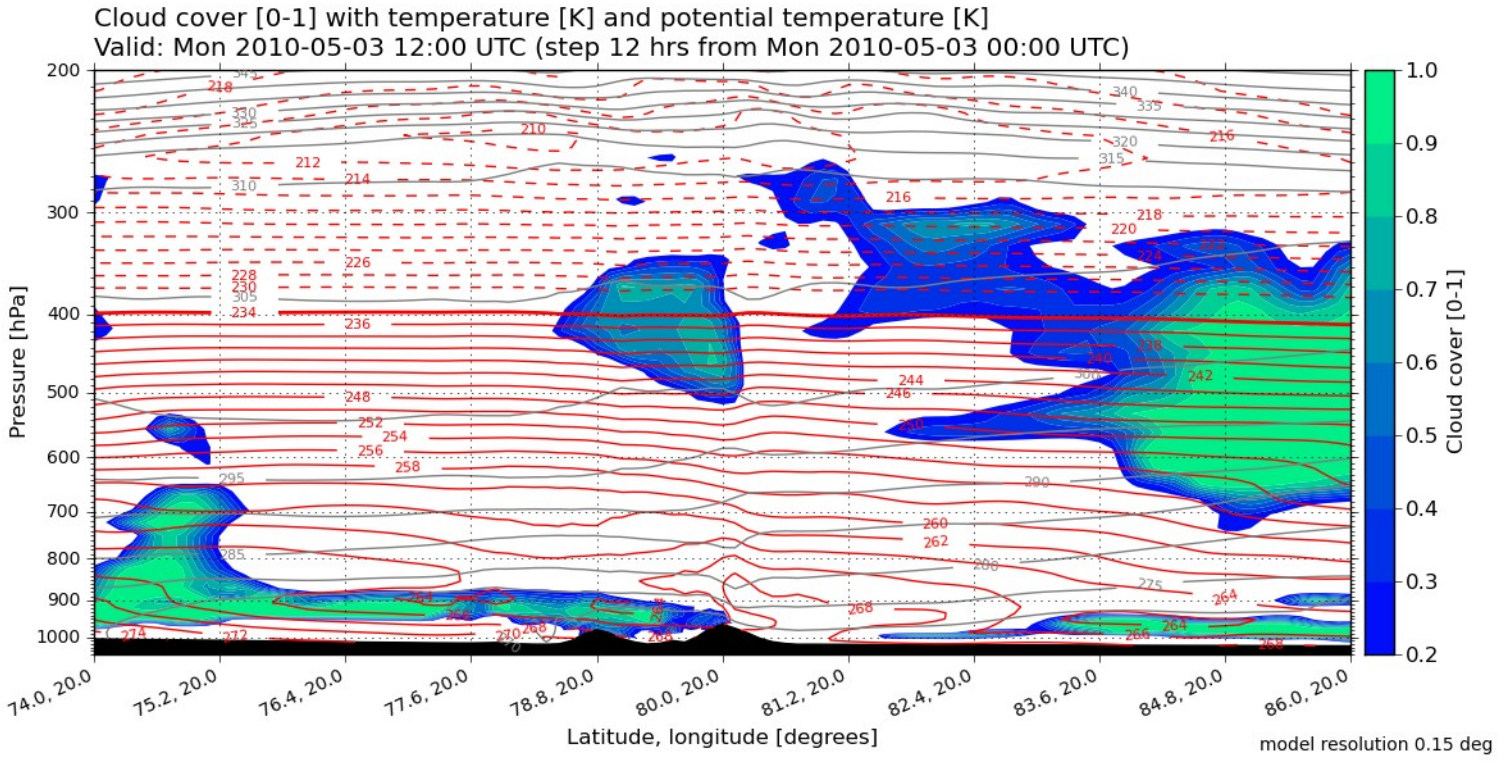
N-S along 15E



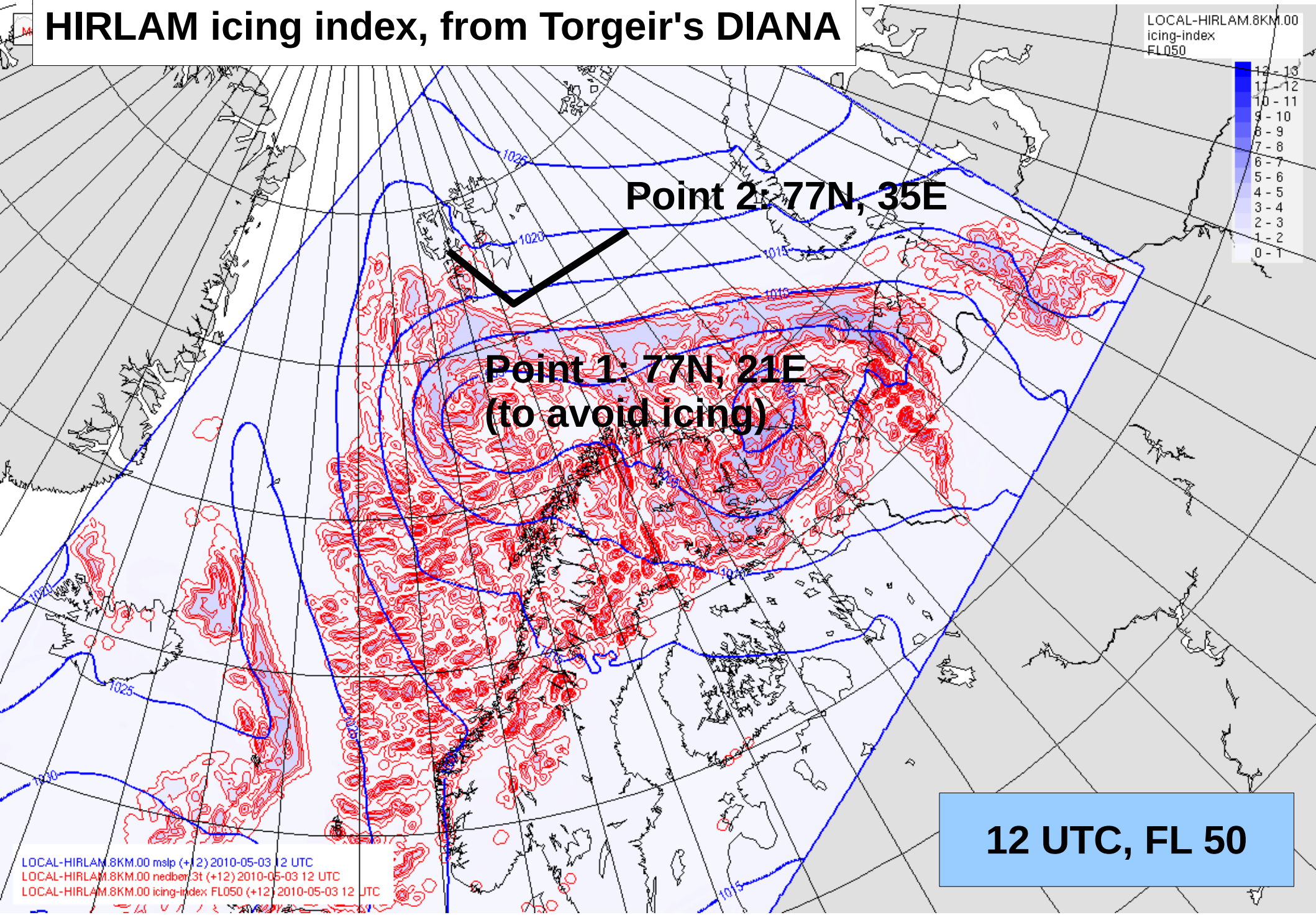
DLR ECMWF

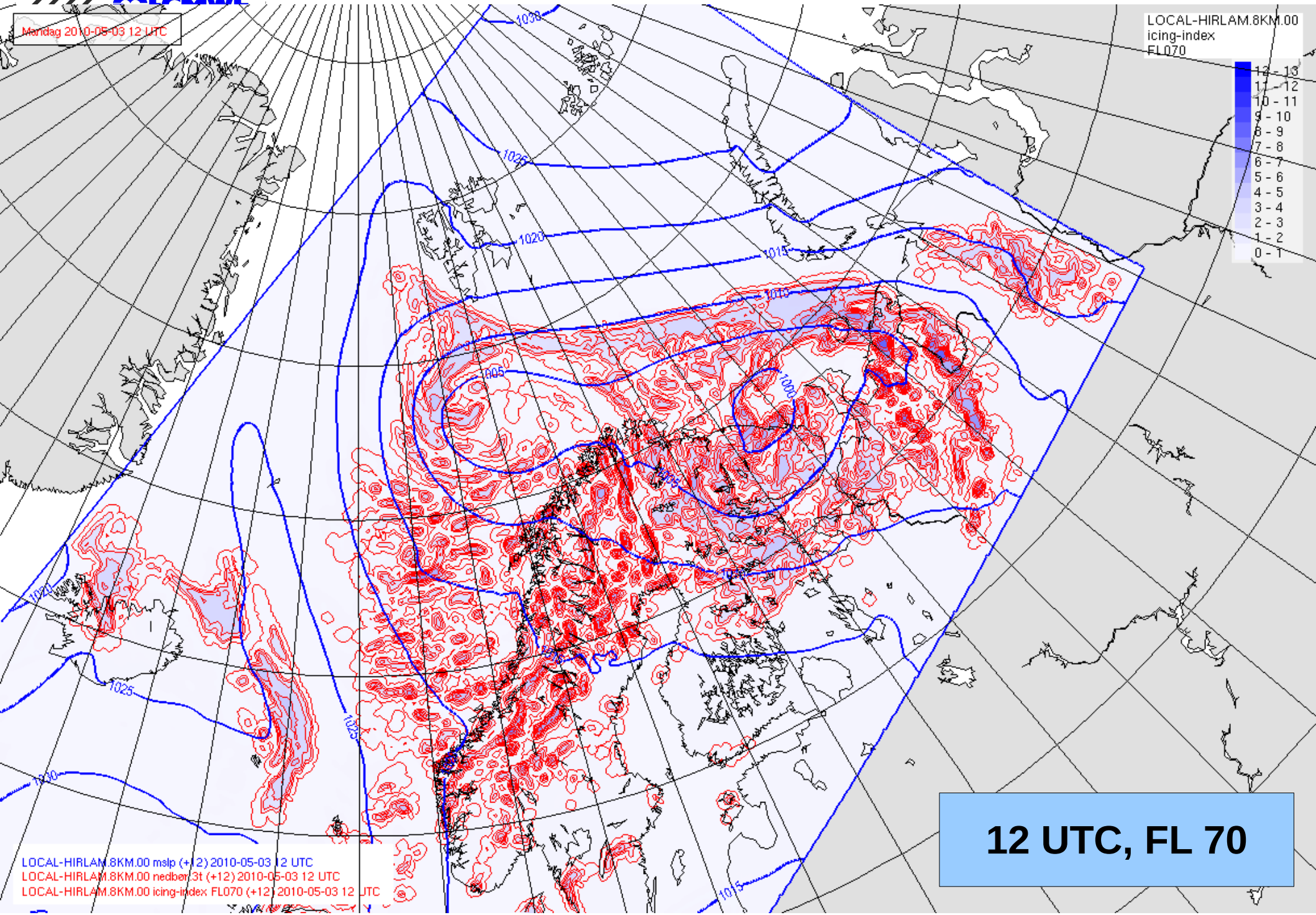


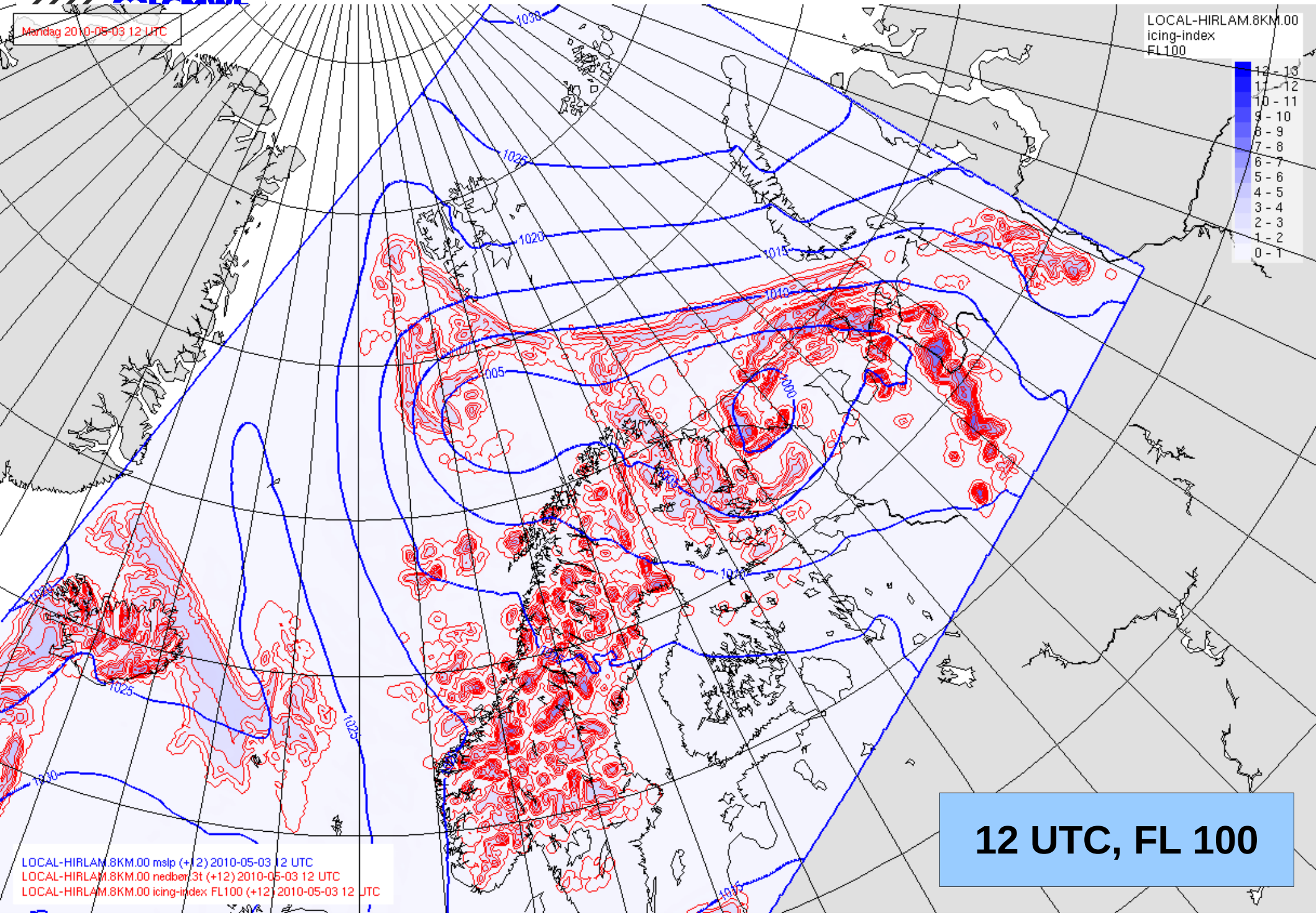
N-S along 20E



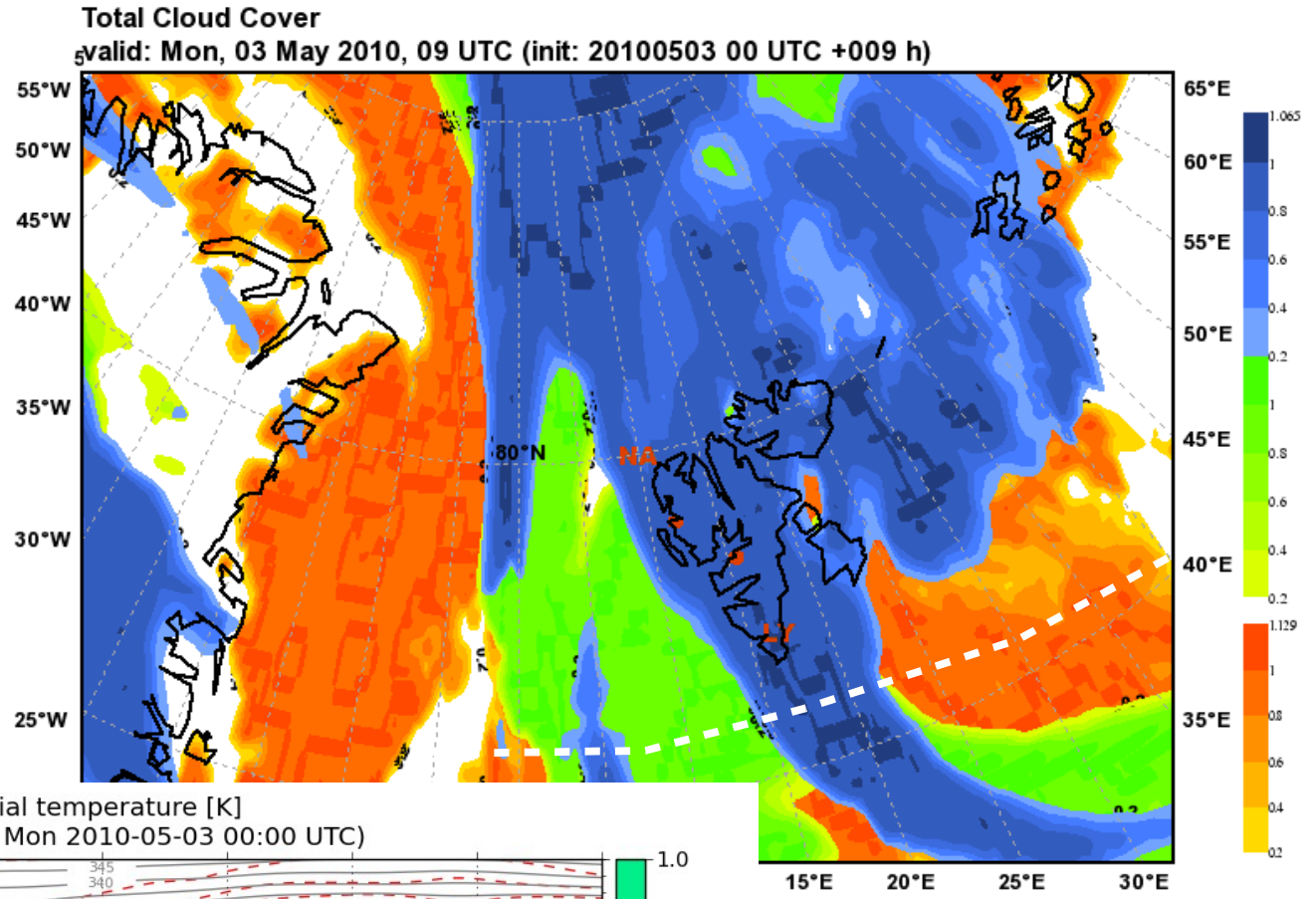
HIRLAM icing index, from Torgeir's DIANA



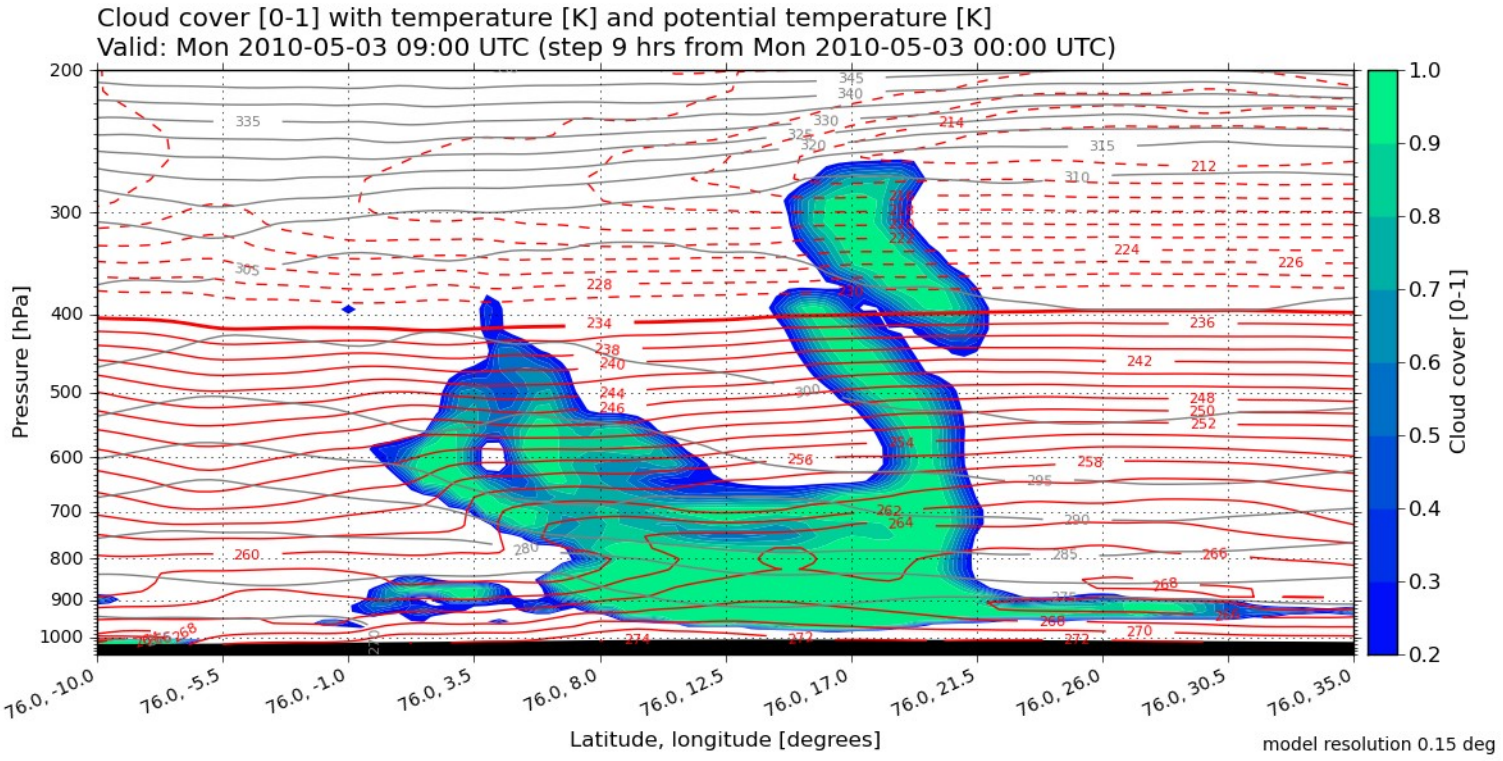

Mandag 2010-05-03 12 UTC
LOCAL-HIRLAM.8KM.00
icing-index
FL070
12 - 13
11 - 12
10 - 11
9 - 10
8 - 9
7 - 8
6 - 7
5 - 6
4 - 5
3 - 4
2 - 3
1 - 2
0 - 1
1030
1025
1020
1015
1010
1005
1000
LOCAL-HIRLAM.8KM.00 mslp (+12) 2010-05-03 12 UTC
LOCAL-HIRLAM.8KM.00 nedbør 3t (+12) 2010-05-03 12 UTC
LOCAL-HIRLAM.8KM.00 icing-index FL070 (+12) 2010-05-03 12 UTC
12 UTC, FL 70


Mandag 2010-05-03 12 UTC
LOCAL-HIRLAM.8KM.00
icing-index
FL100
12 - 13
11 - 12
10 - 11
9 - 10
8 - 9
7 - 8
6 - 7
5 - 6
4 - 5
3 - 4
2 - 3
1 - 2
0 - 1
1030
1025
1020
1015
1010
1005
1000
995
990
985
LOCAL-HIRLAM.8KM.00 mslp (+12) 2010-05-03 12 UTC
LOCAL-HIRLAM.8KM.00 nedbør 3t (+12) 2010-05-03 12 UTC
LOCAL-HIRLAM.8KM.00 icing-index FL100 (+12) 2010-05-03 12 UTC
12 UTC, FL 100

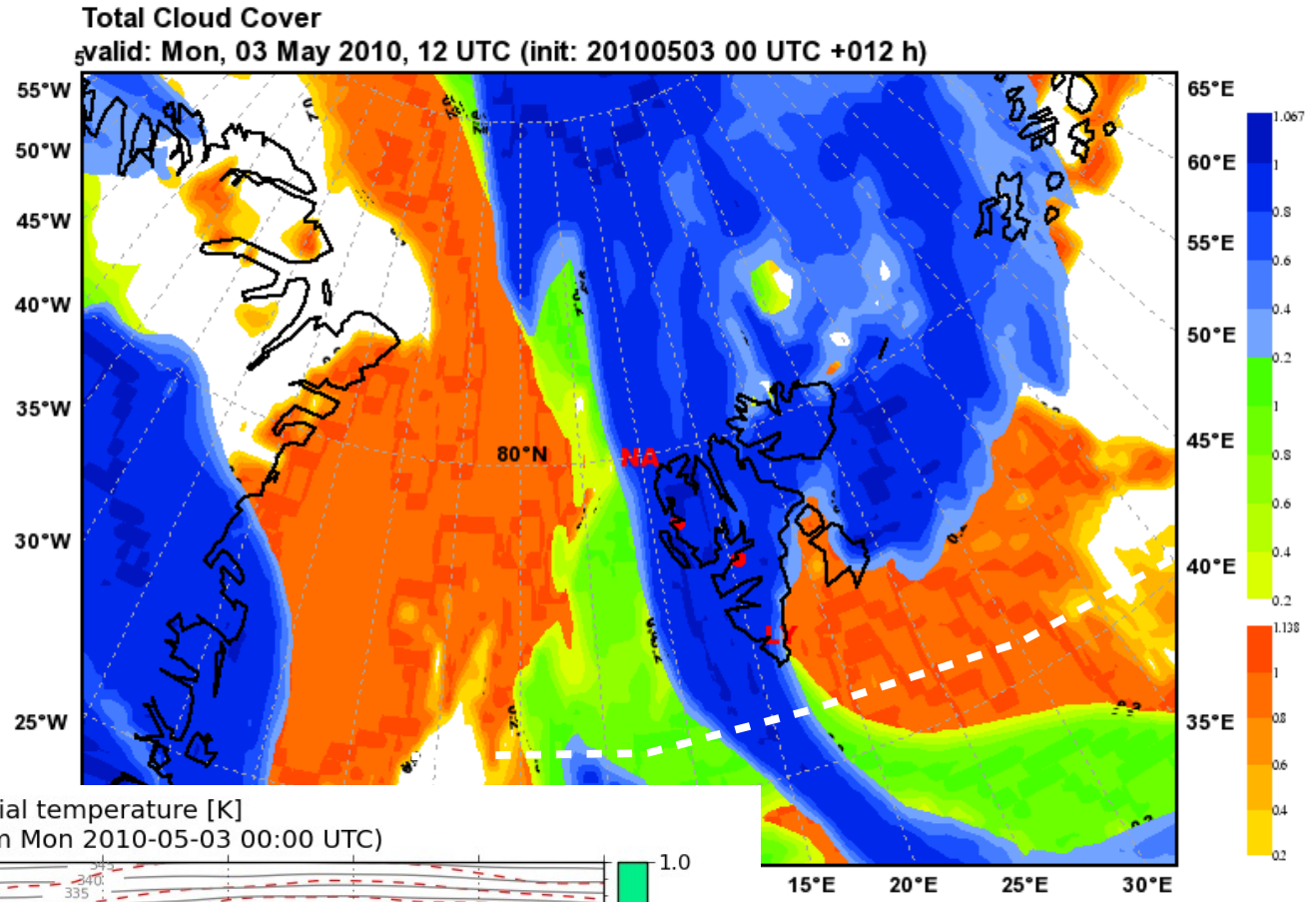
Cloud development Monday



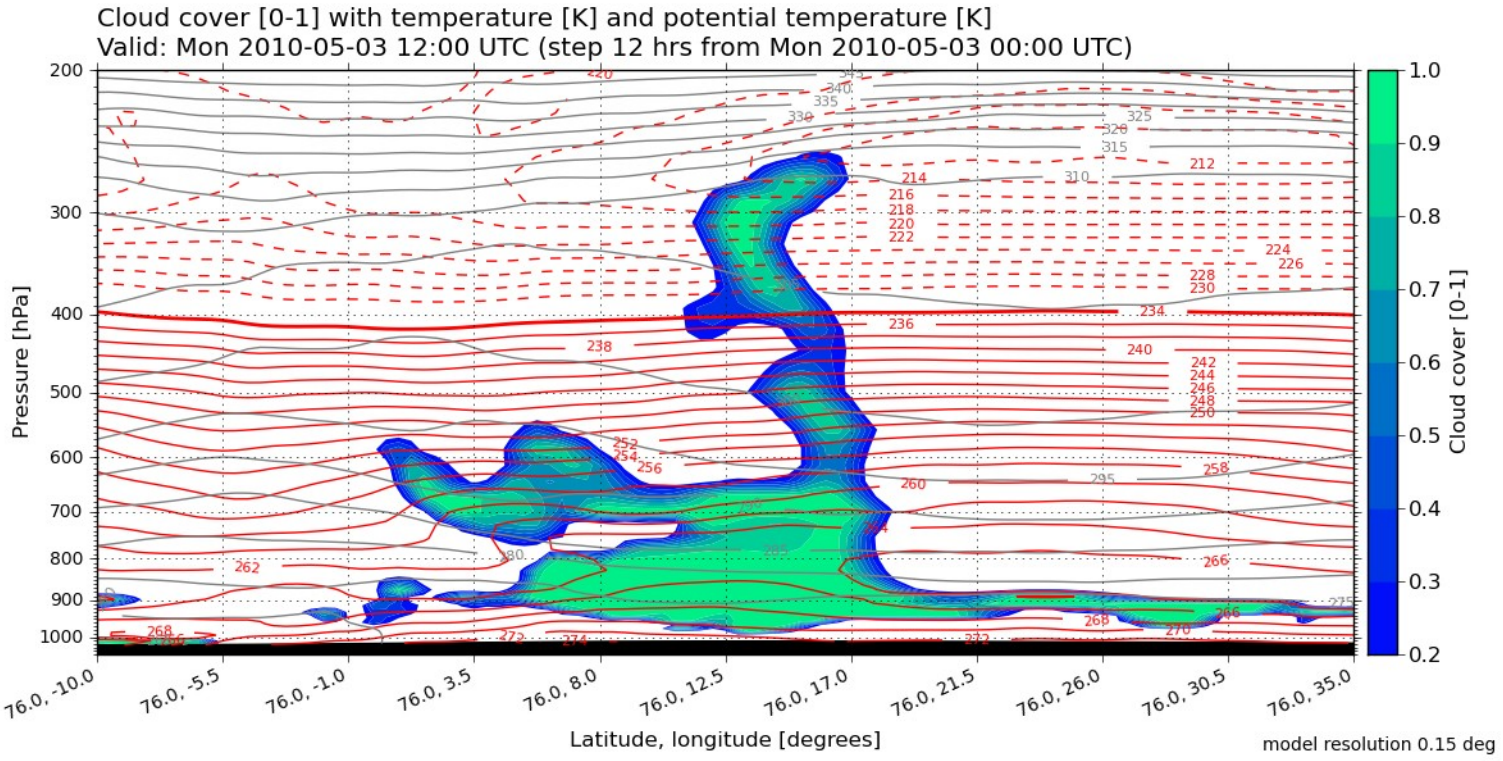
E-W along 76N



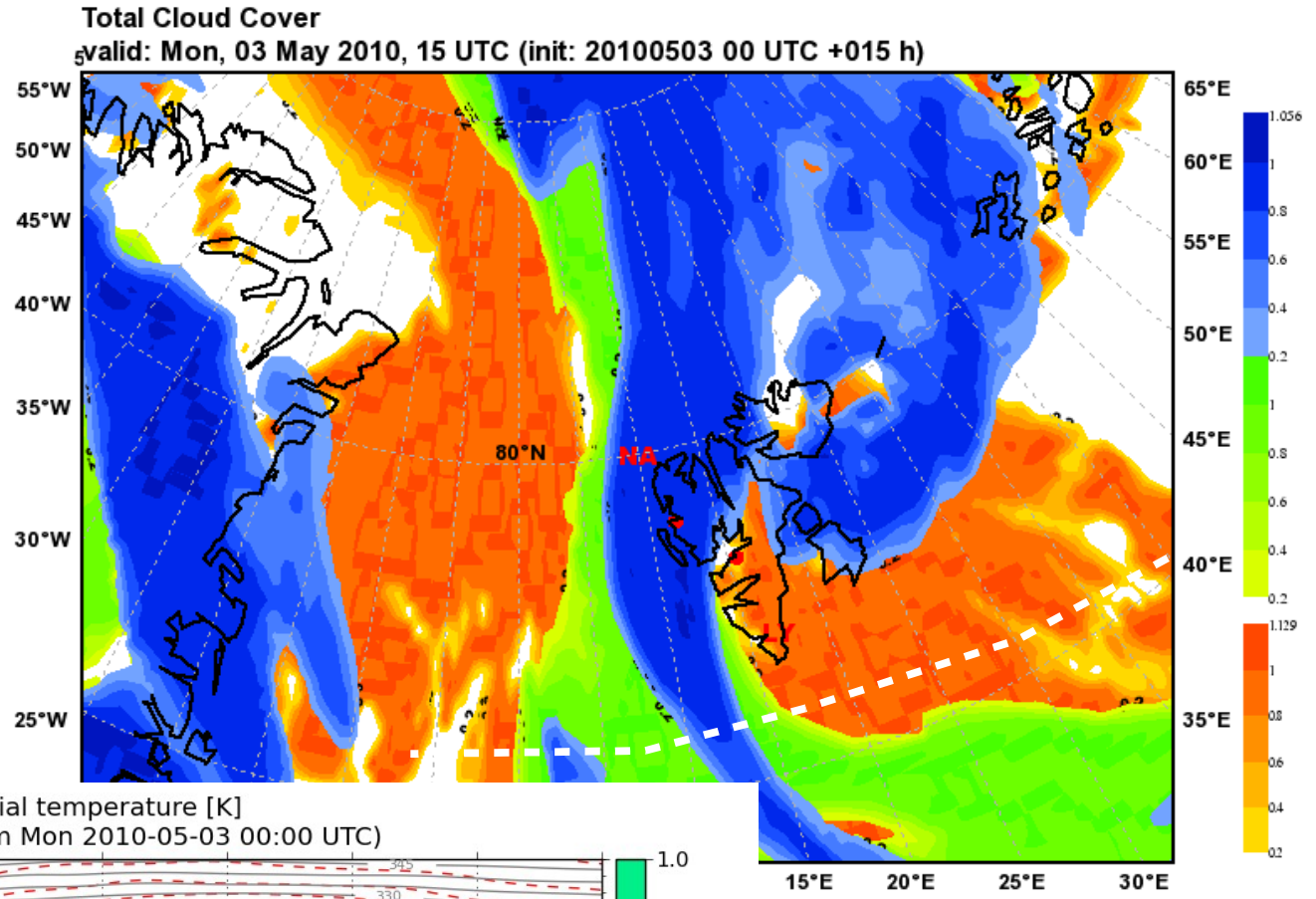
DLR ECMWF



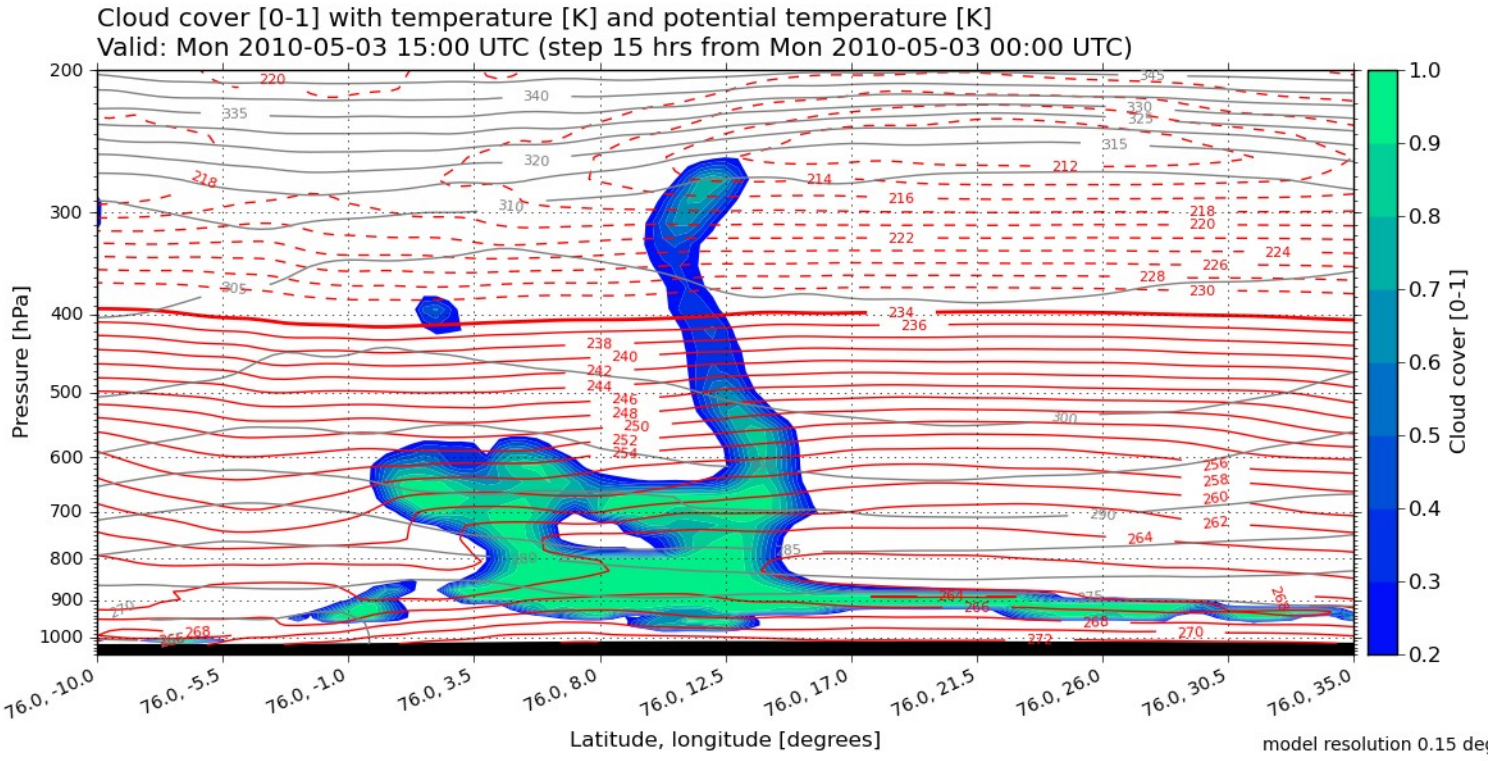
E-W along 76N



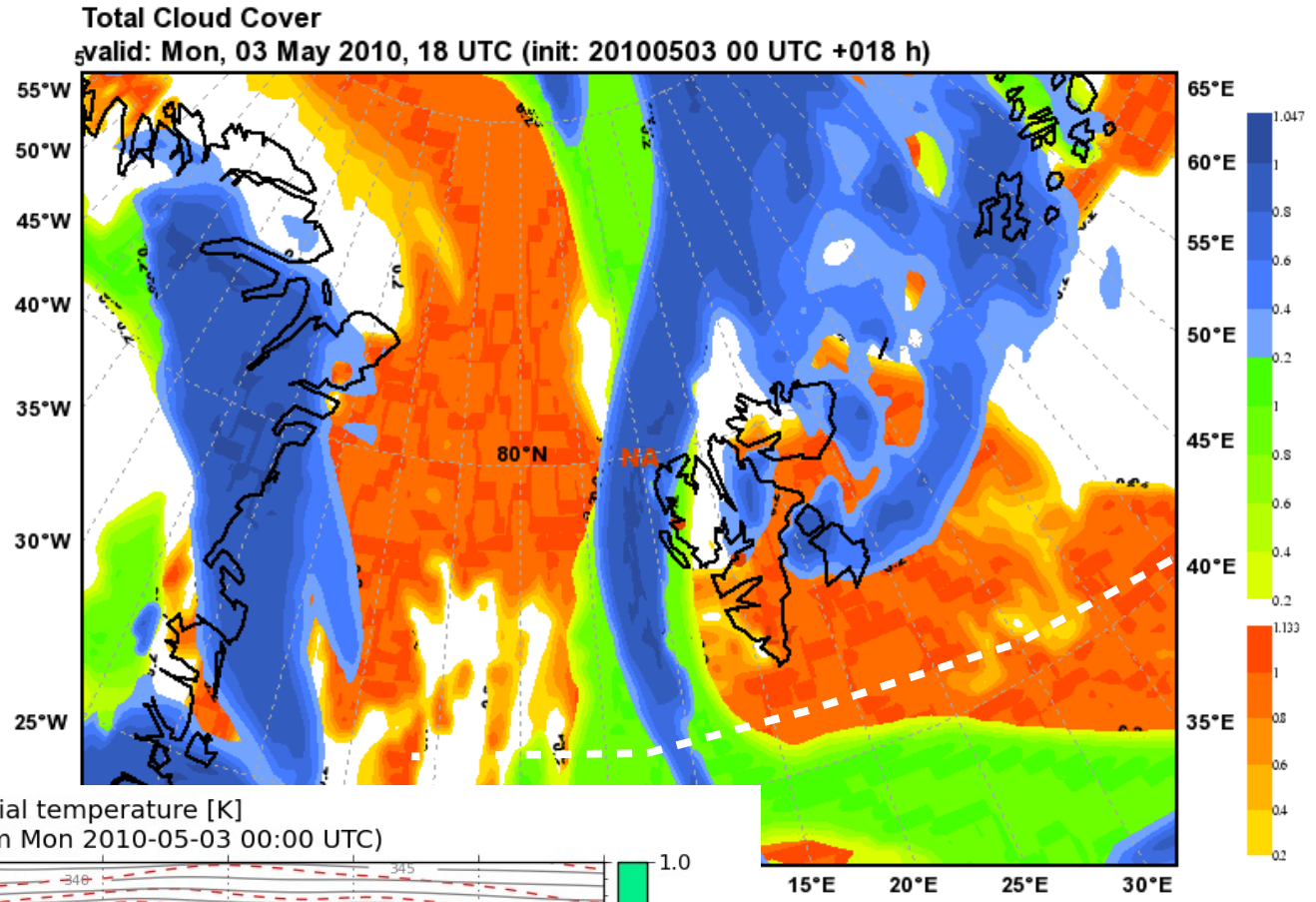
DLR ECMWF



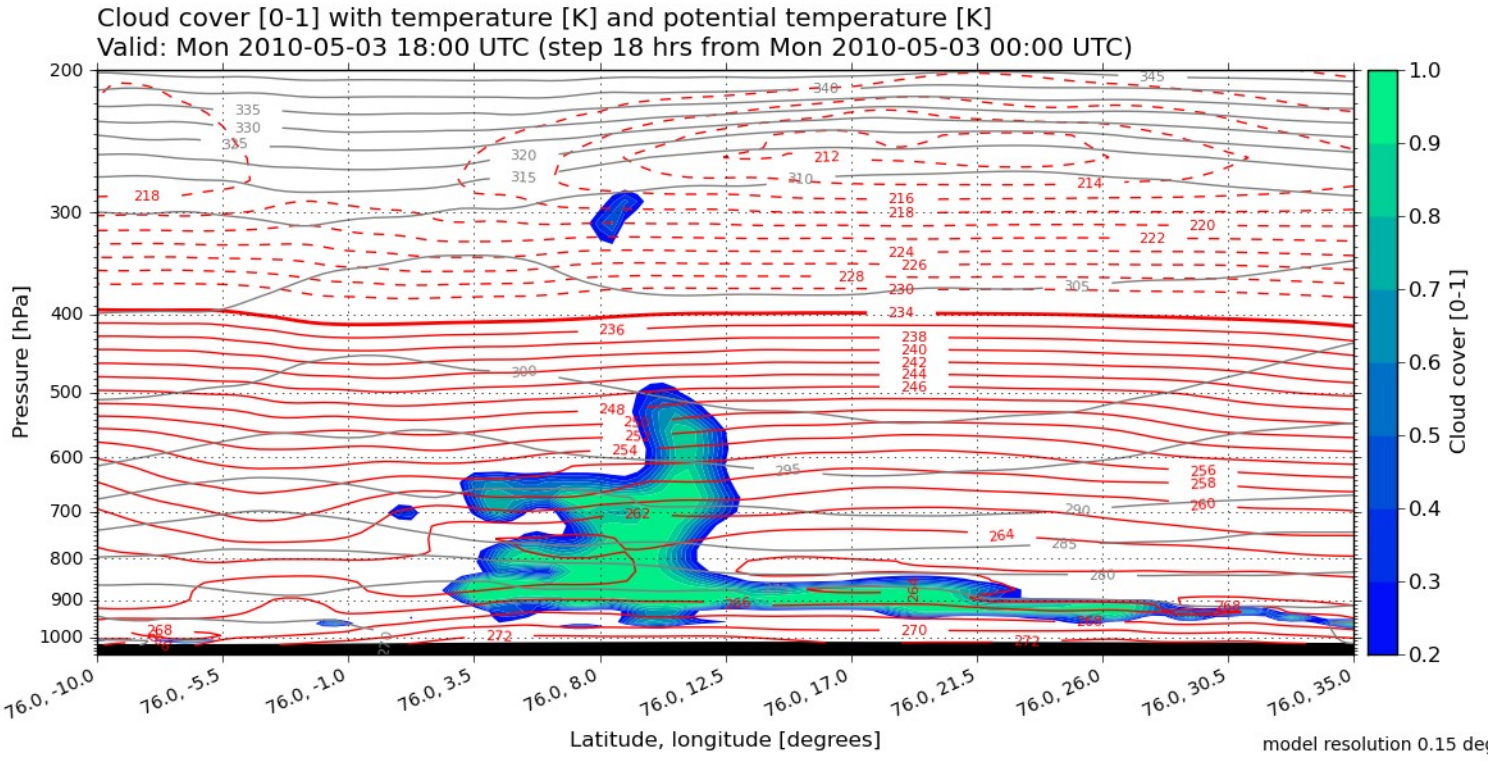
E-W along 76N



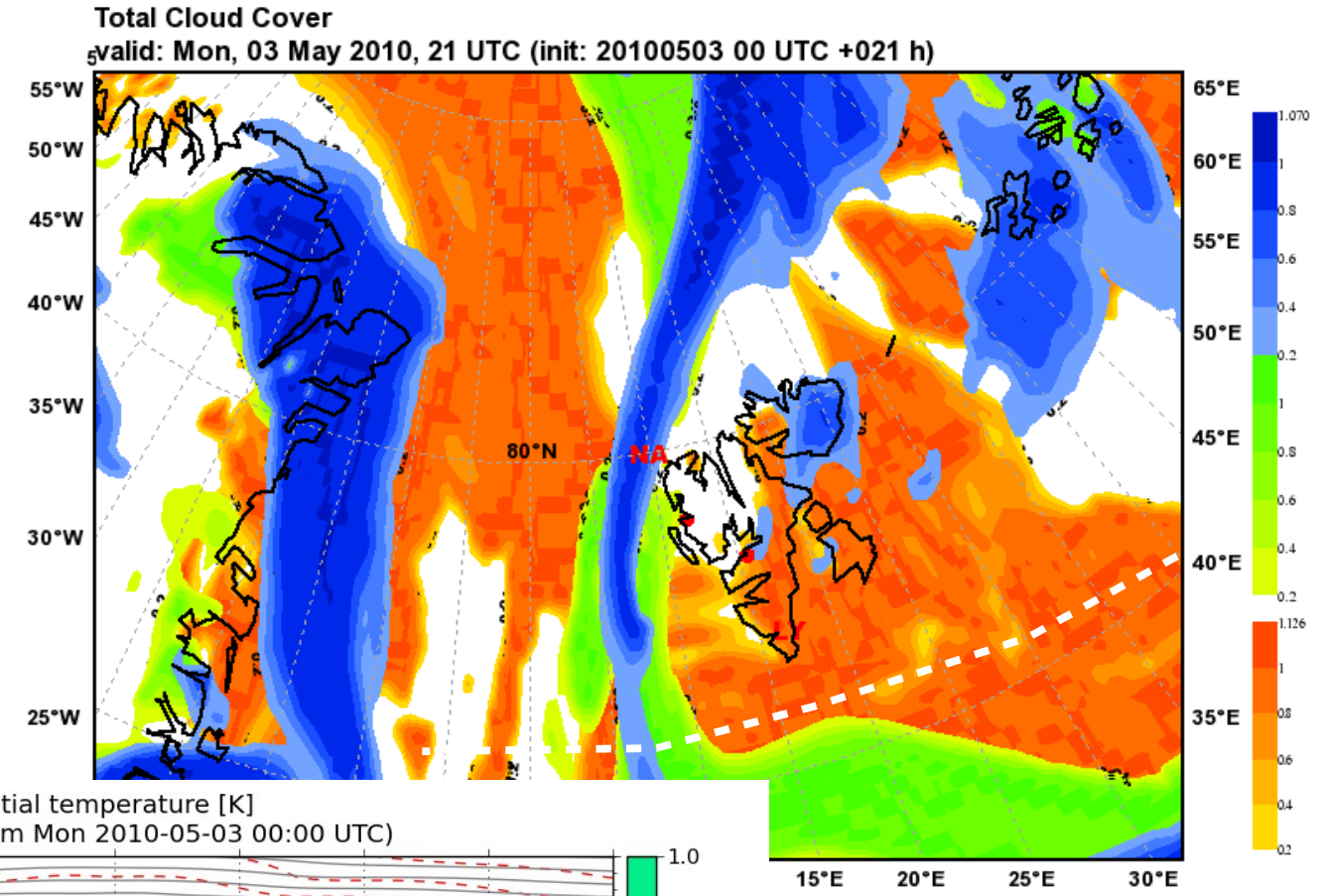
DLR ECMWF



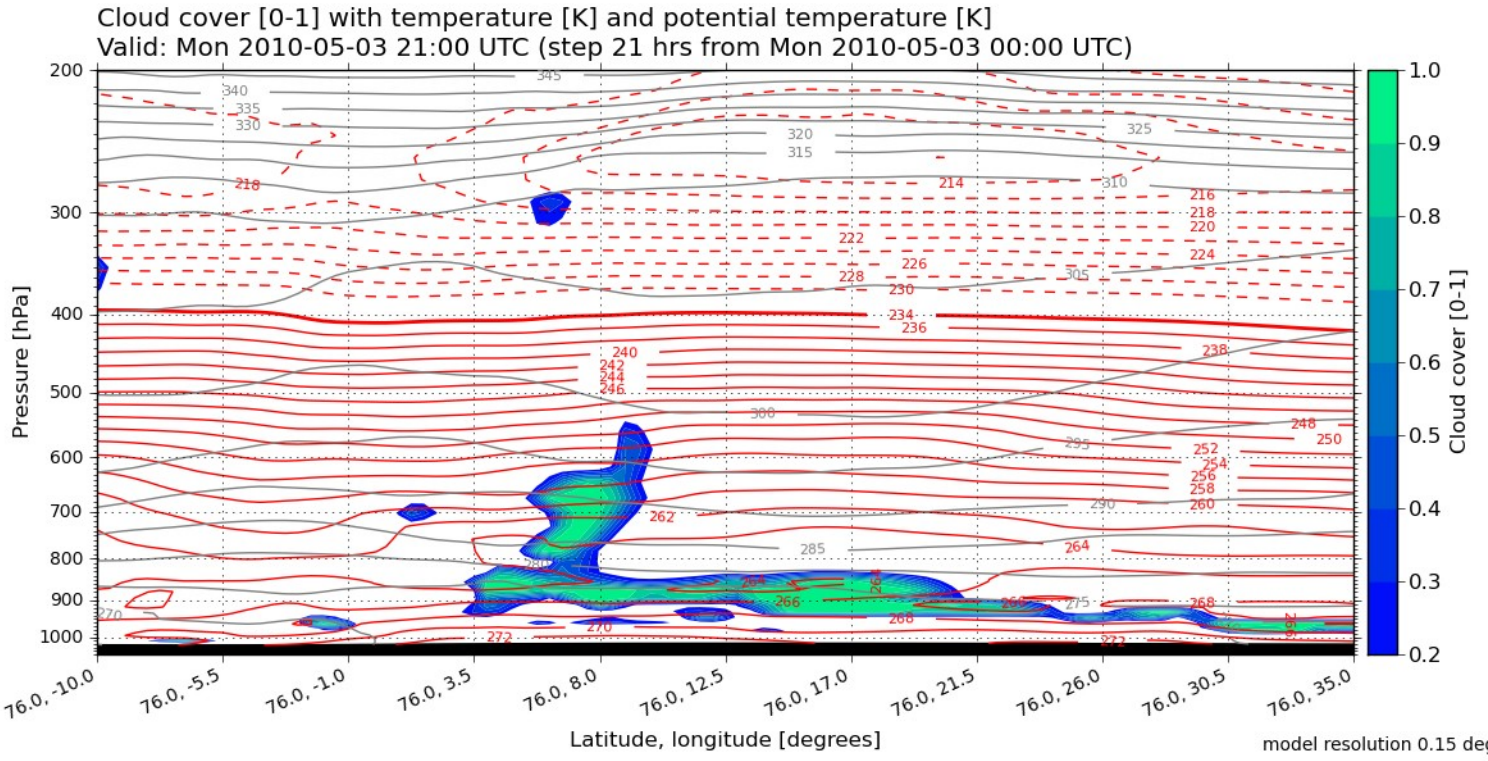
E-W along 76N



DLR ECMWF



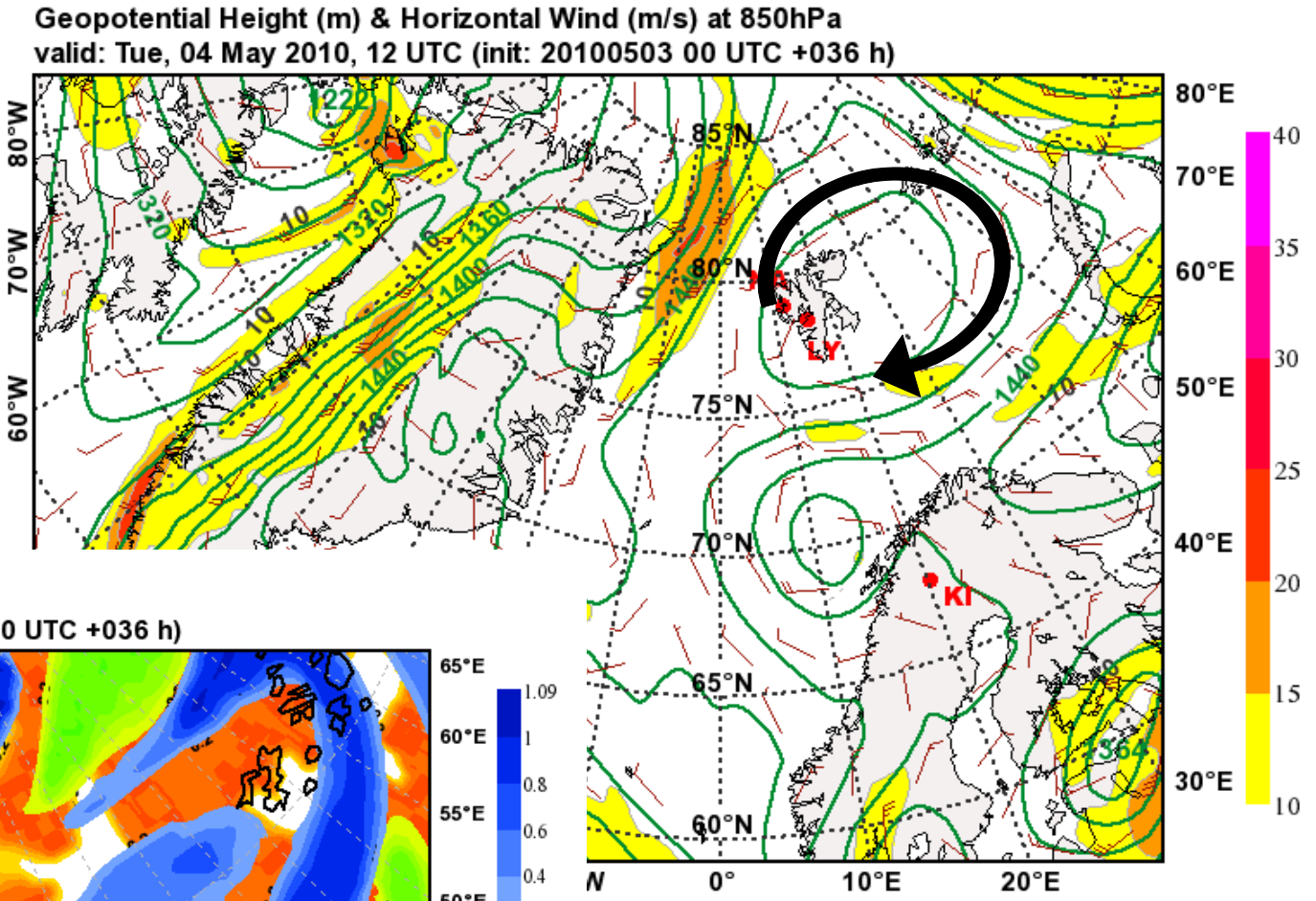
E-W along 76N

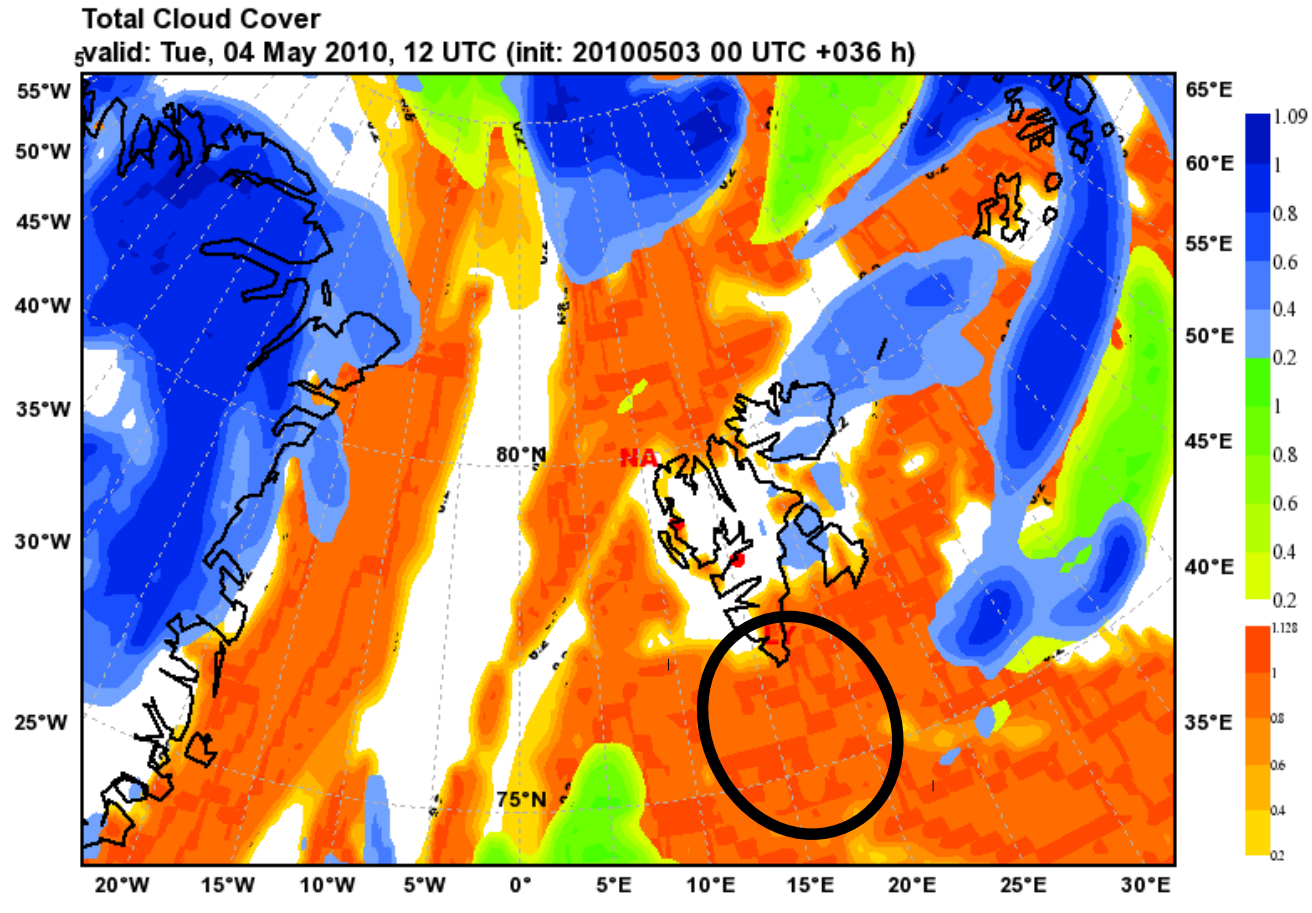


Development Tue - Fri

DLR ECMWF

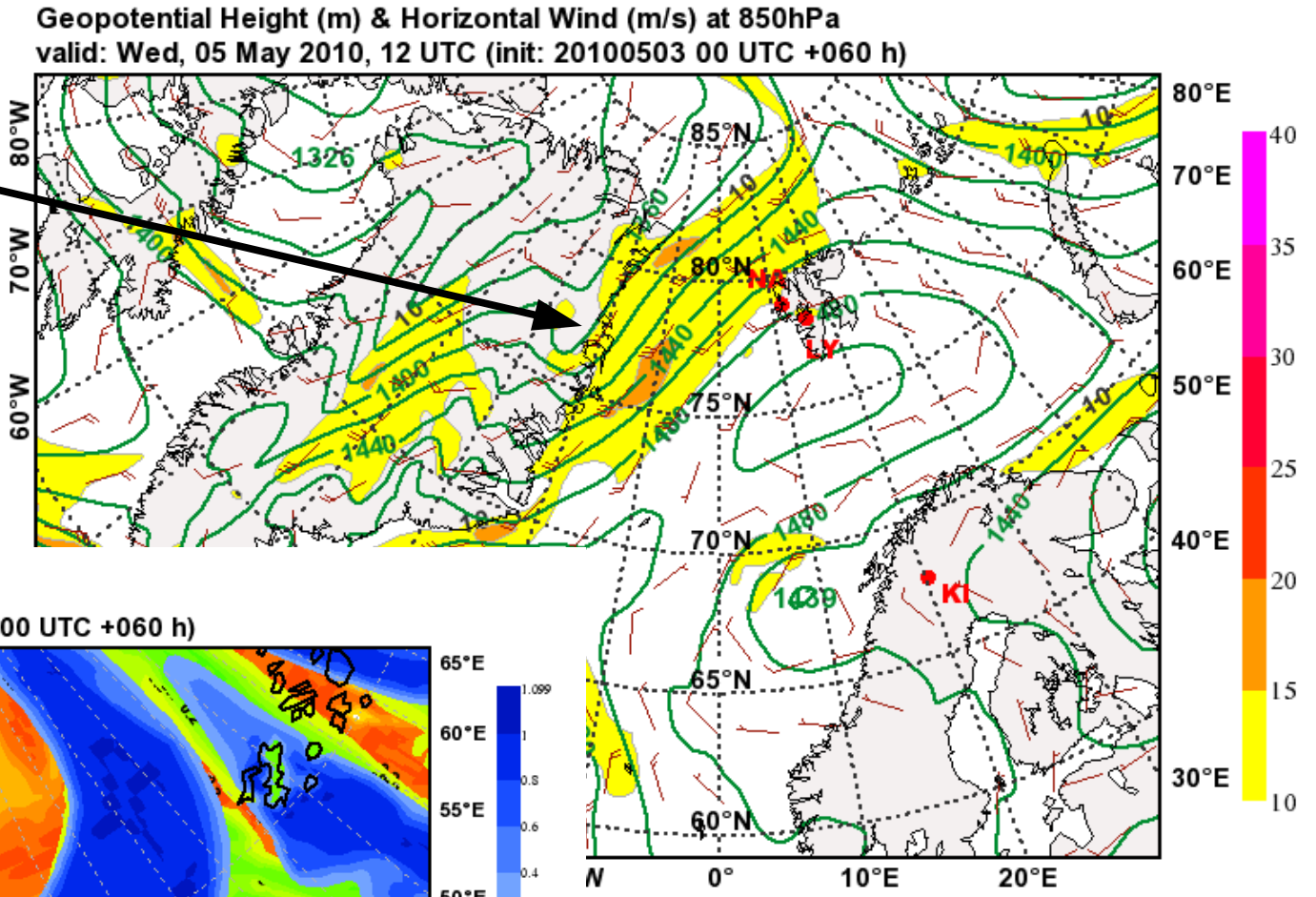
High pressure on Tuesday.

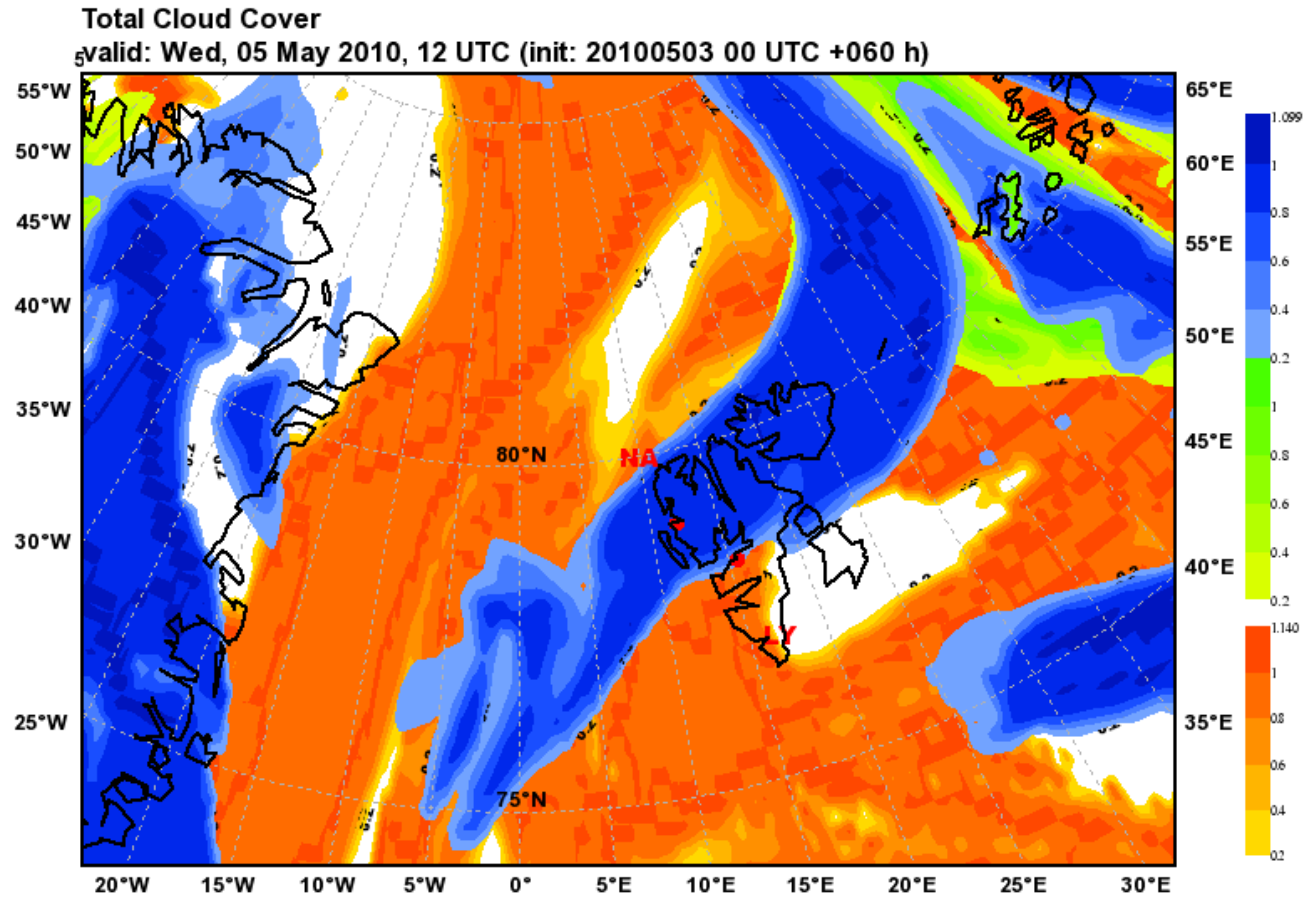




Fly south to get maximum chance of clouds?

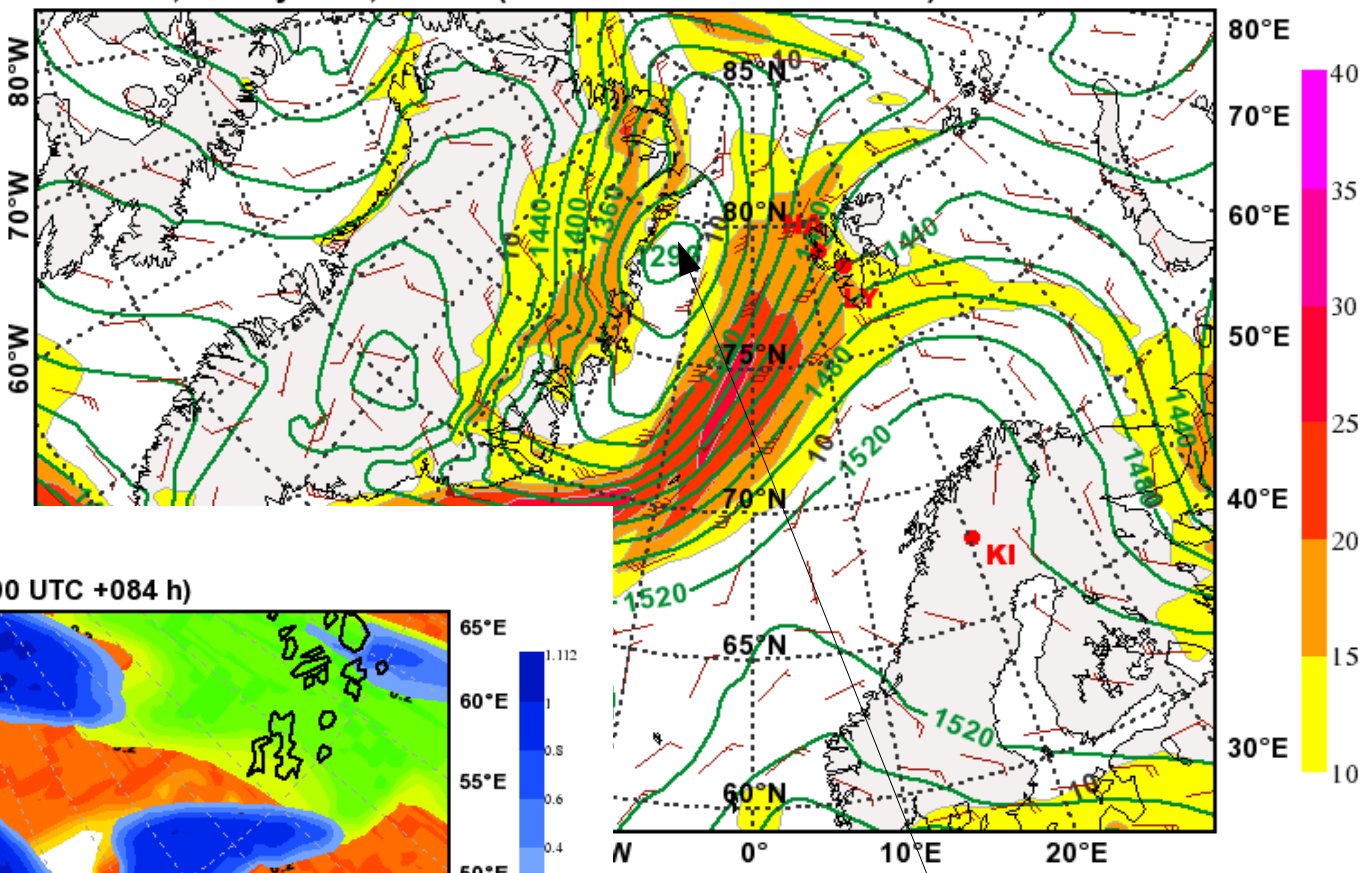
Wave developing into strong cyclone.



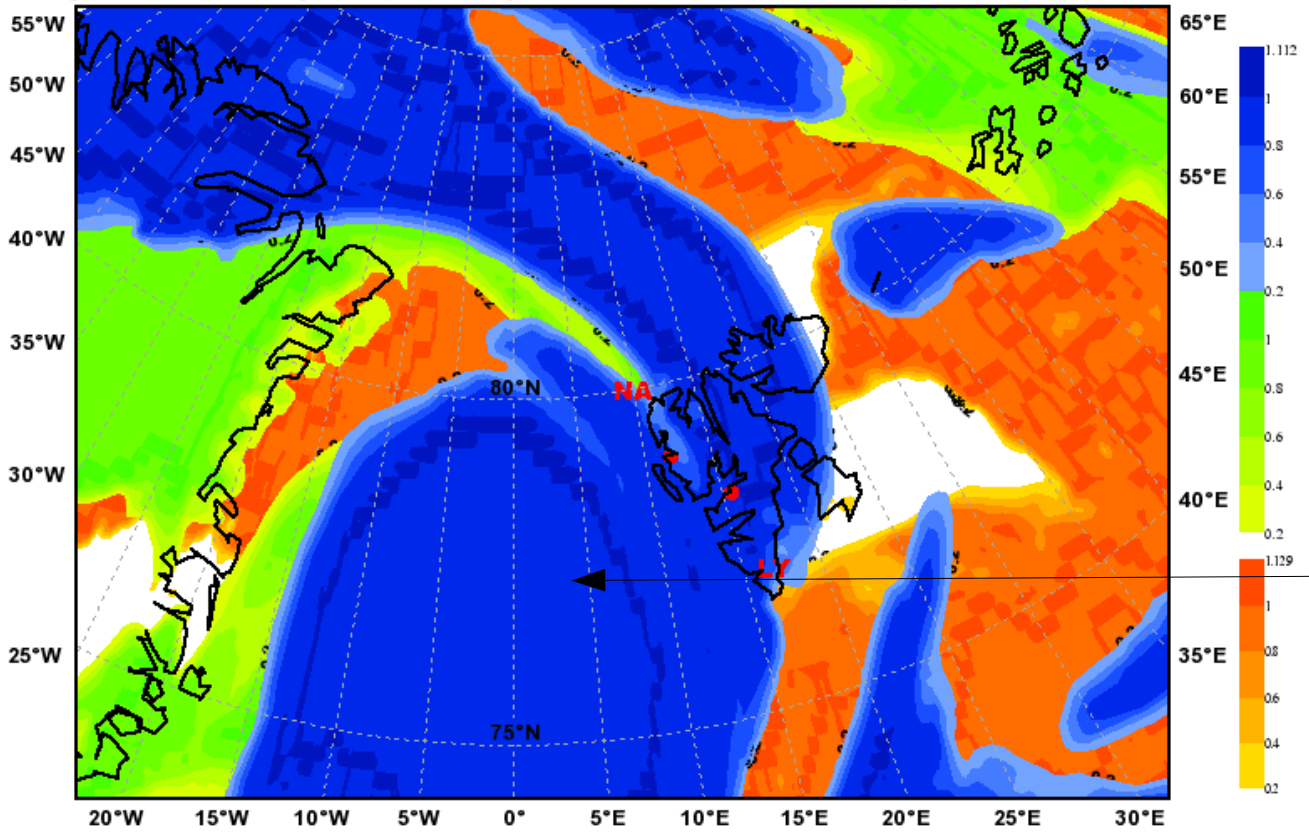


DLR ECMWF

Geopotential Height (m) & Horizontal Wind (m/s) at 850hPa
valid: Thu, 06 May 2010, 12 UTC (init: 20100503 00 UTC +084 h)



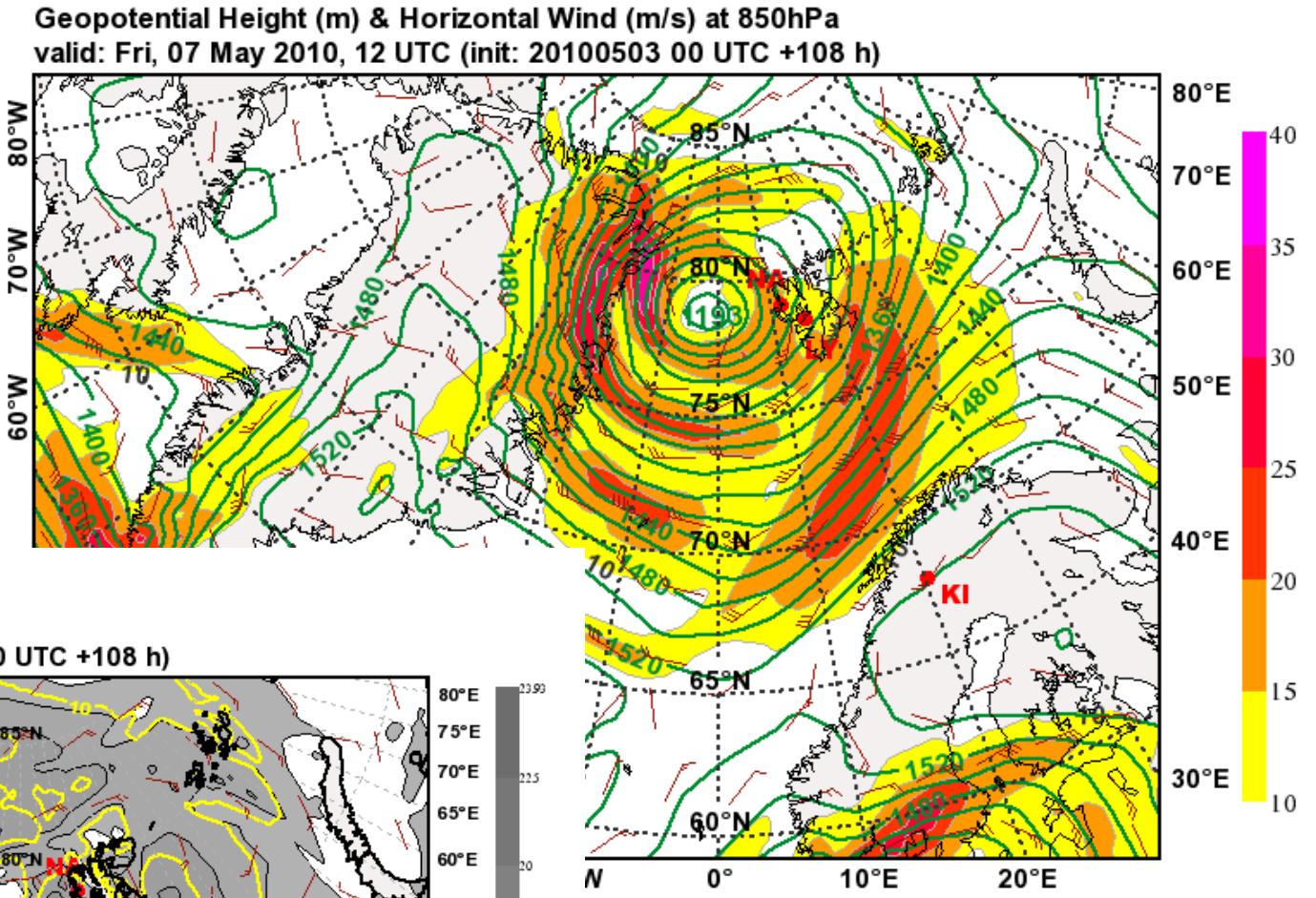
Total Cloud Cover
valid: Thu, 06 May 2010, 12 UTC (init: 20100503 00 UTC +084 h)

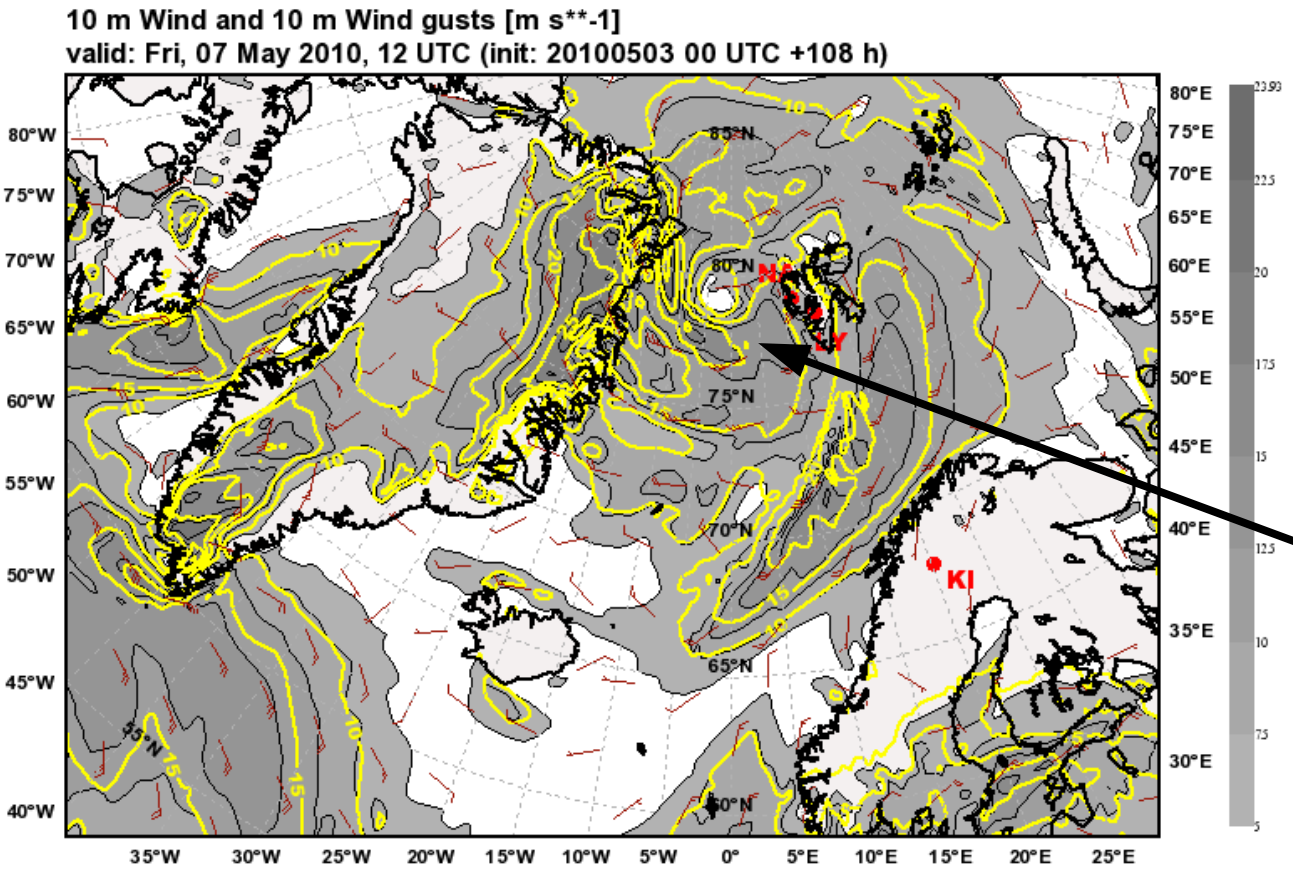


Low approaching

DLR ECMWF

Cyclone deepens strongly between Thu noon and Fri noon.



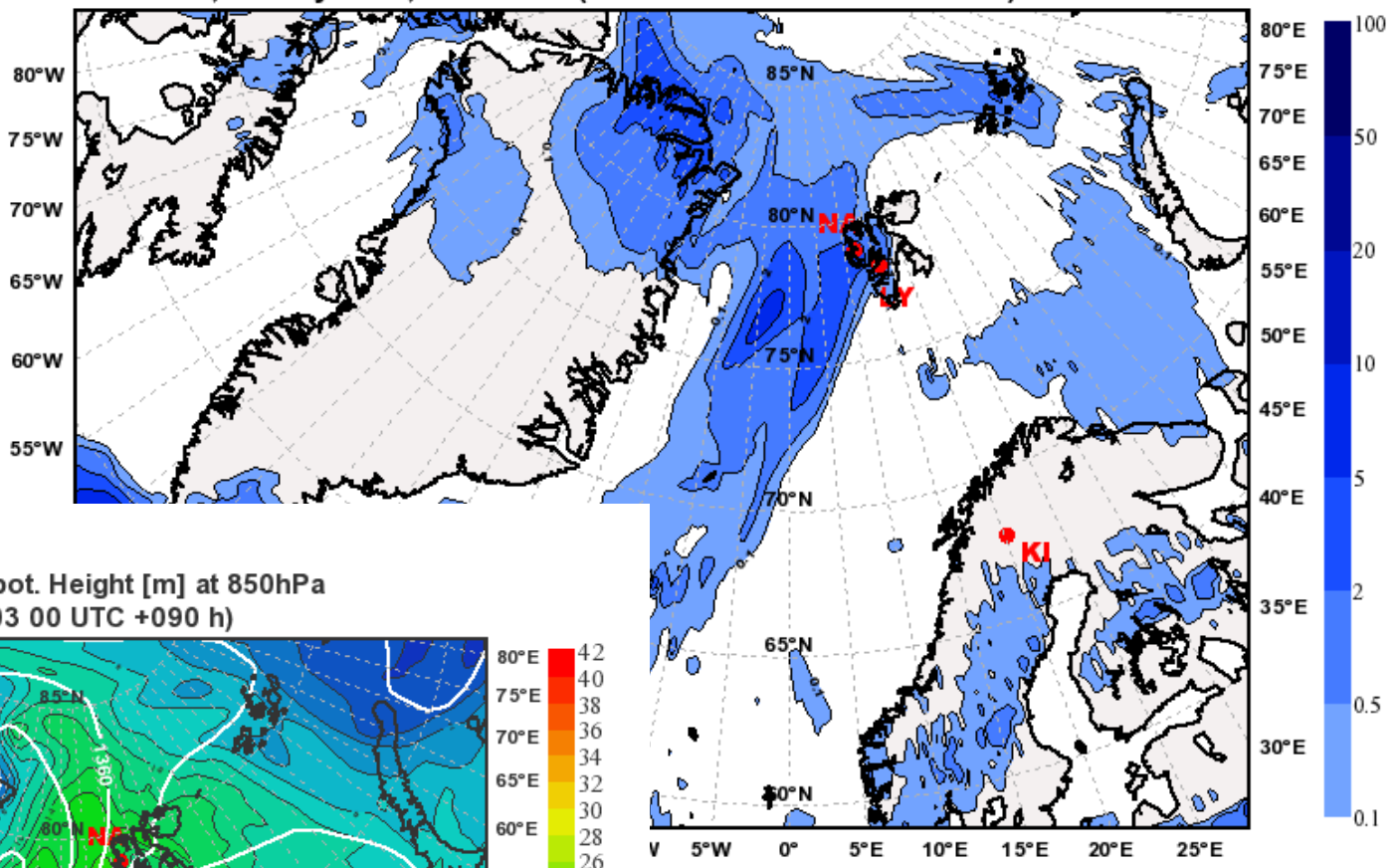


High winds can be reached west of Spitsbergen (7-9 Bft).

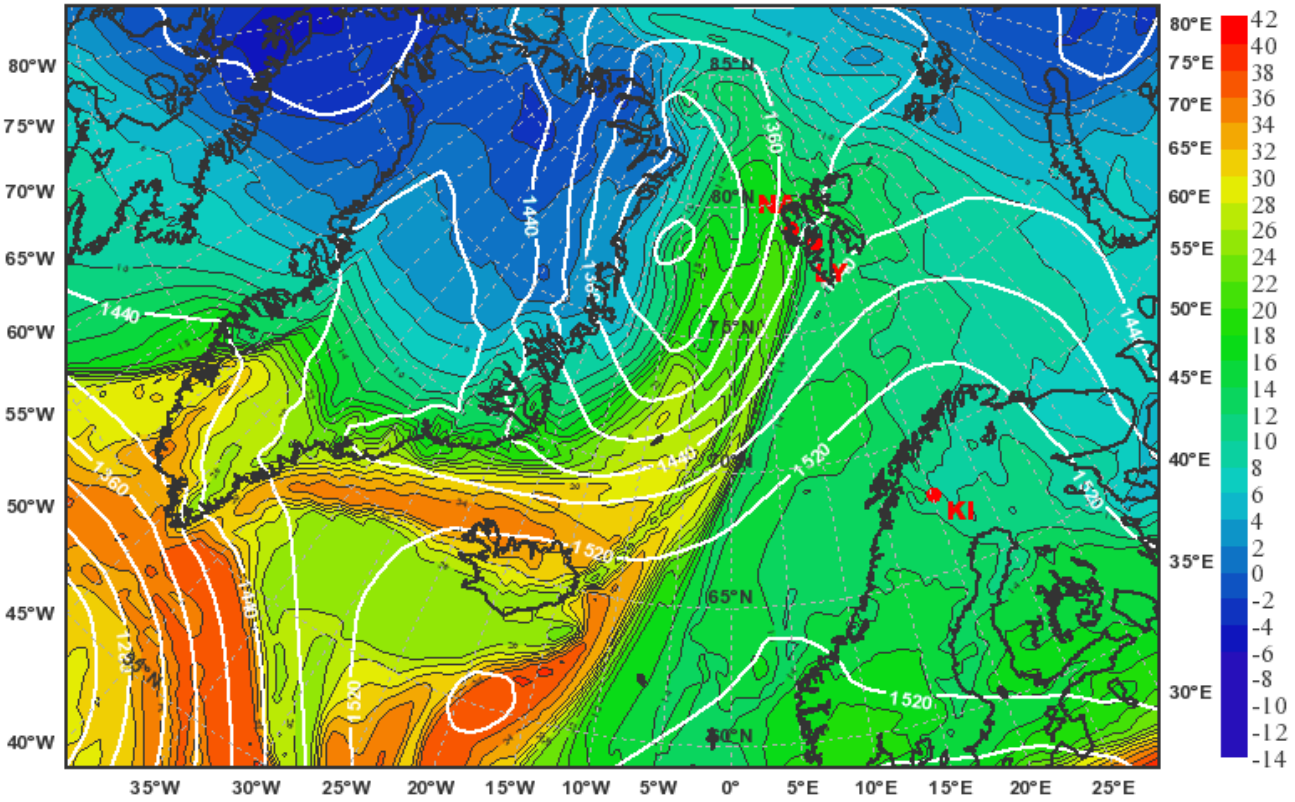
DLR ECMWF

Front arrives Thursday evening.

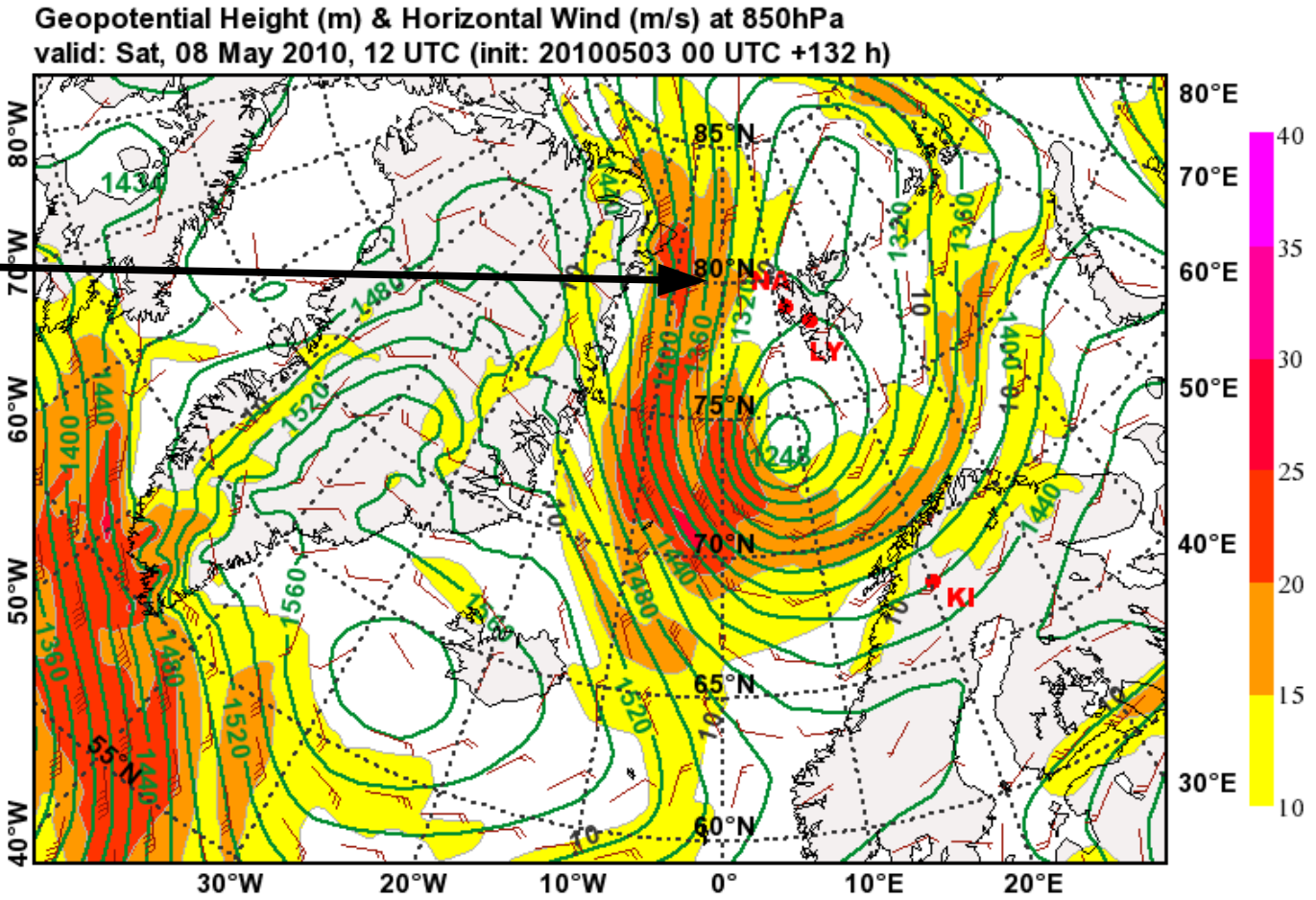
Total Precipitation [mm]
valid: Thu, 06 May 2010, 12-18 UTC (init: 20100503 00 UTC +090 h)



Equivalent Potential Temperature [°C] & Geopot. Height [m] at 850hPa
valid: Thu, 06 May 2010, 18 UTC (init: 20100503 00 UTC +090 h)

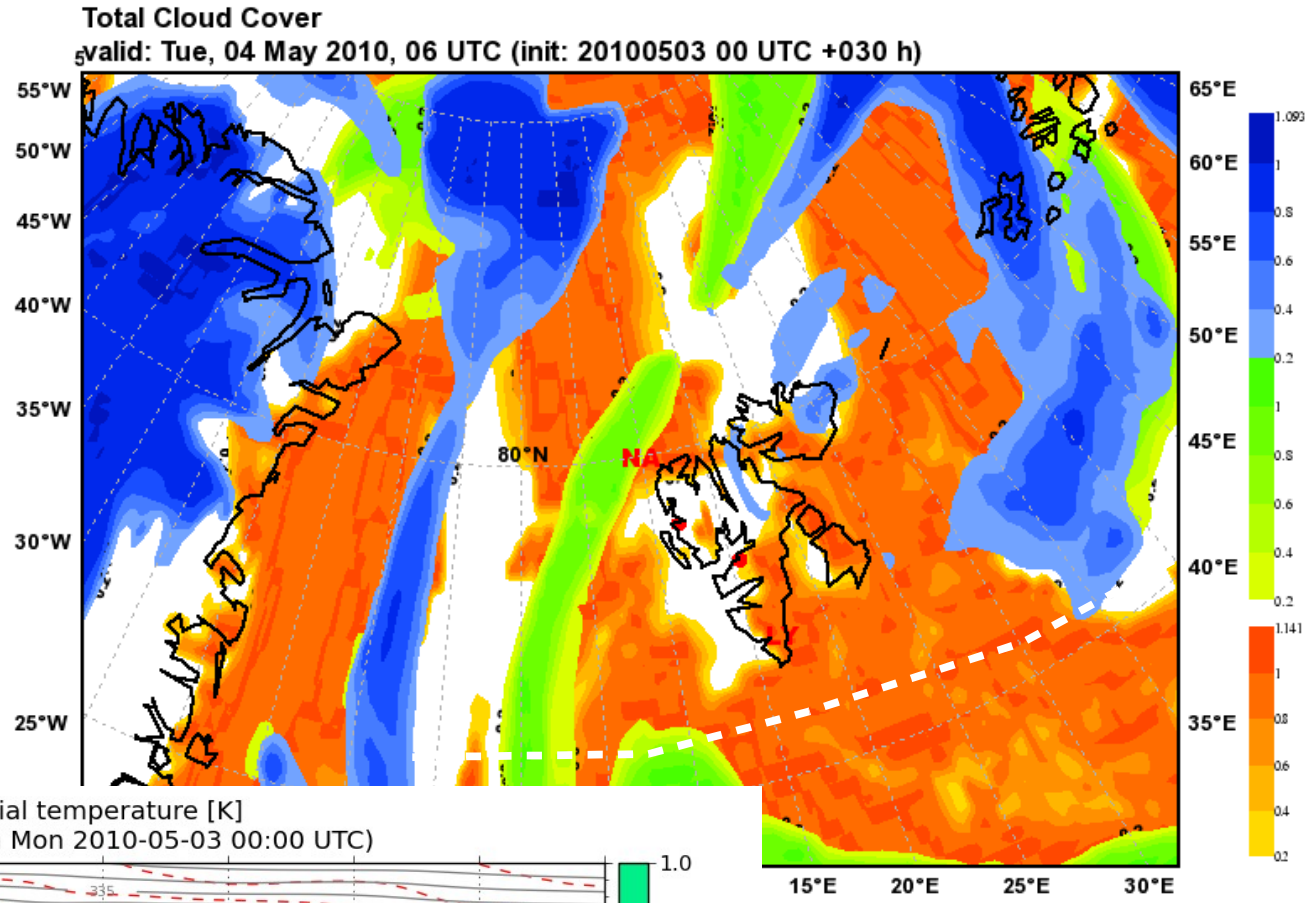


Northerly winds on Saturday?

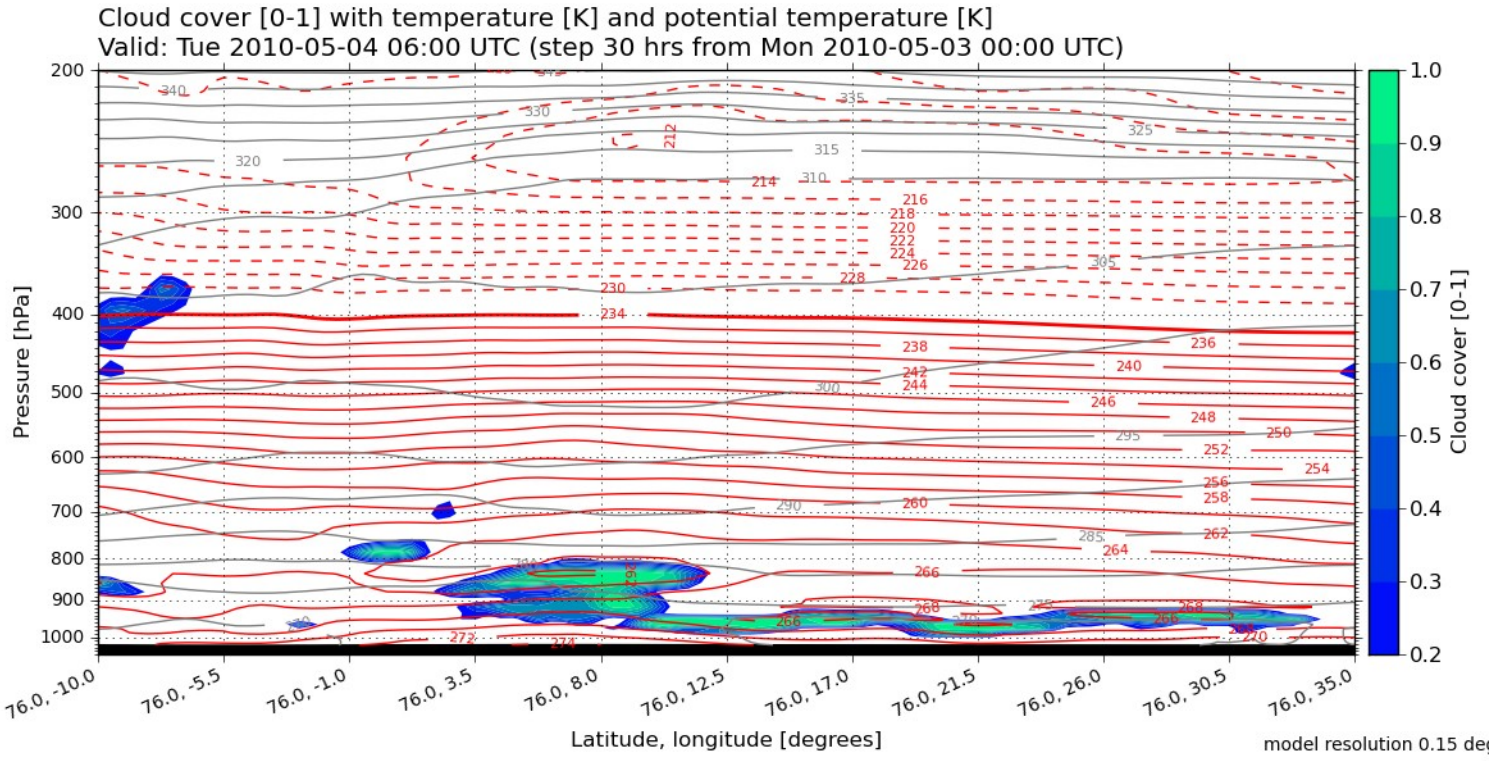


Tuesday vertical sections.

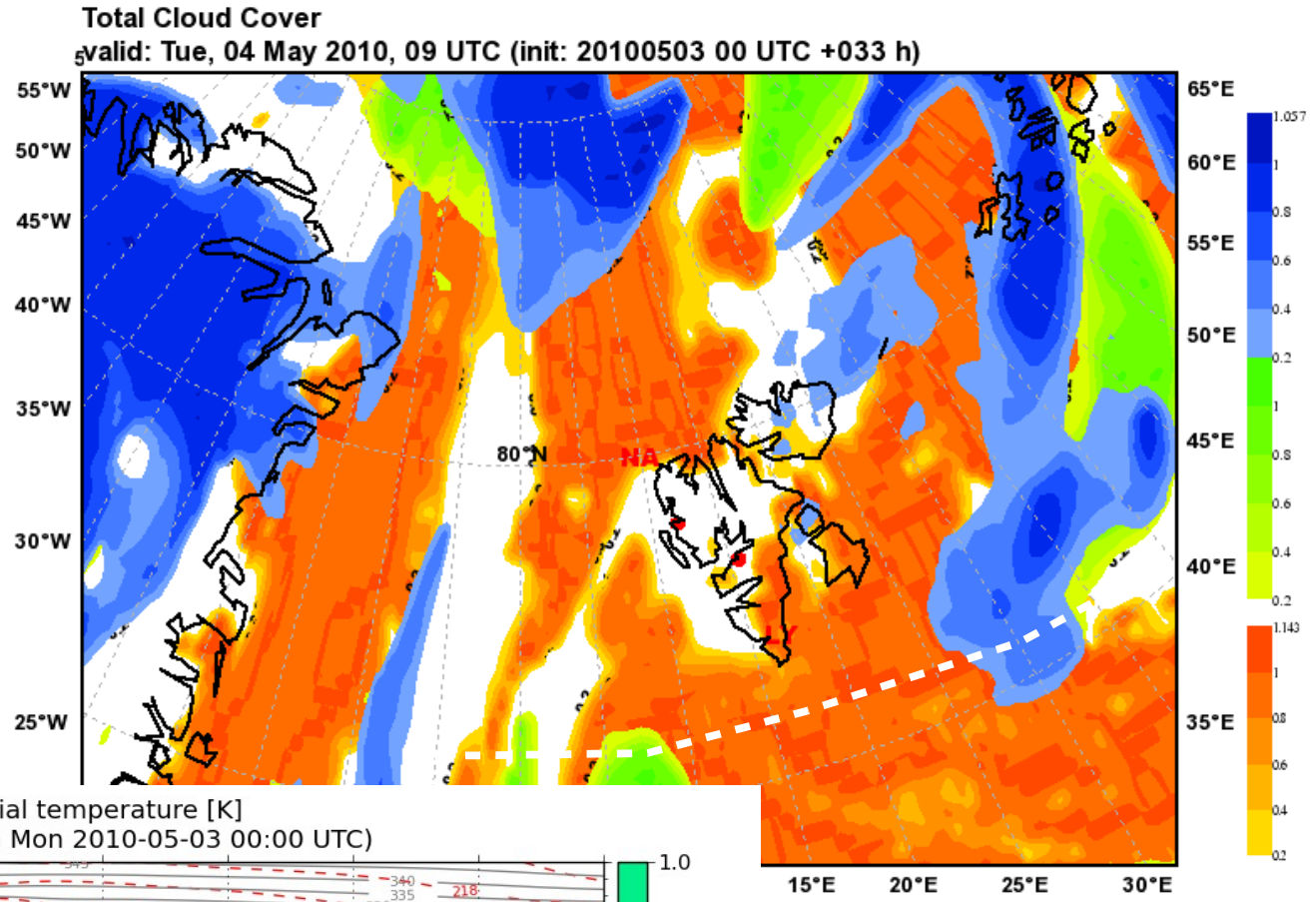
DLR ECMWF



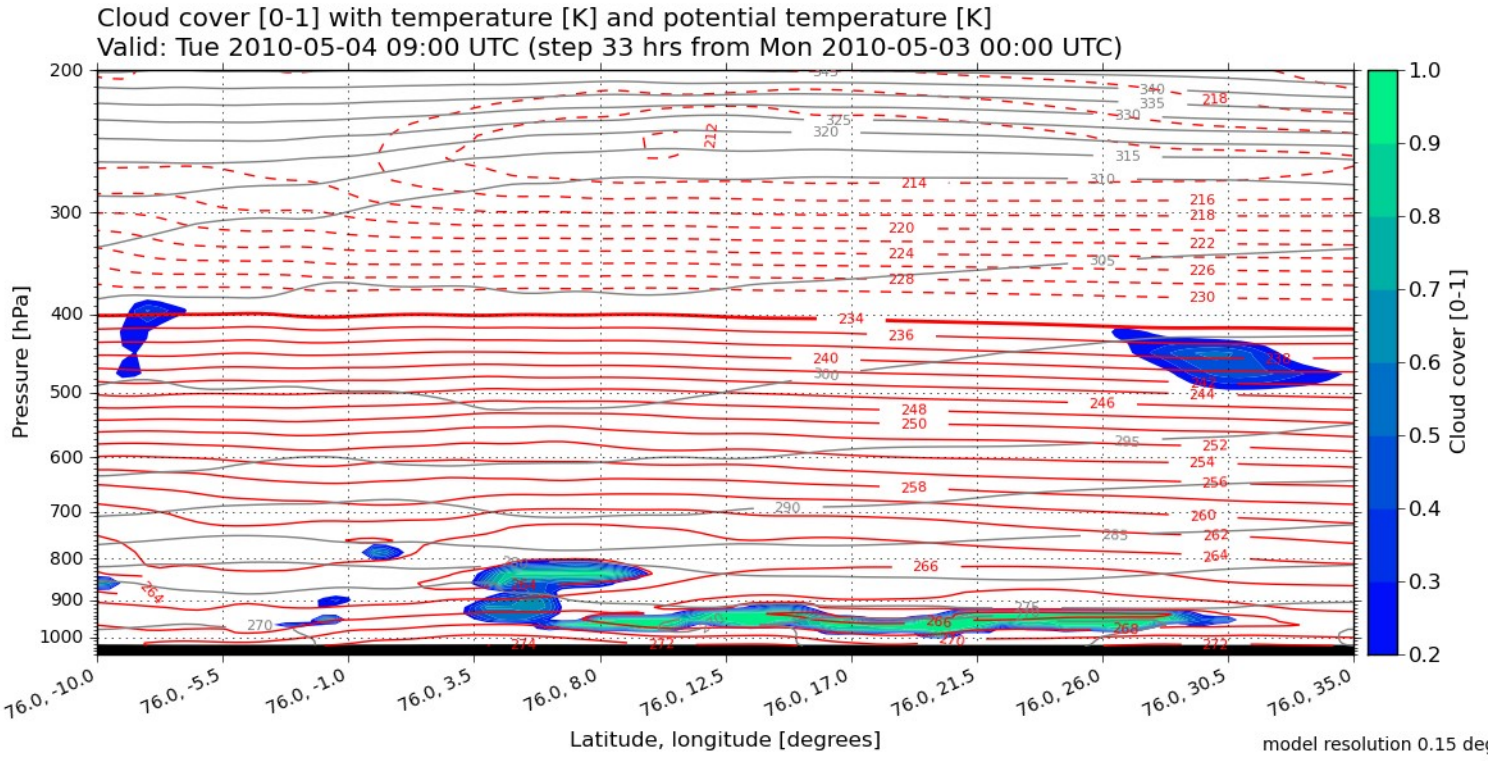
E-W along 76N



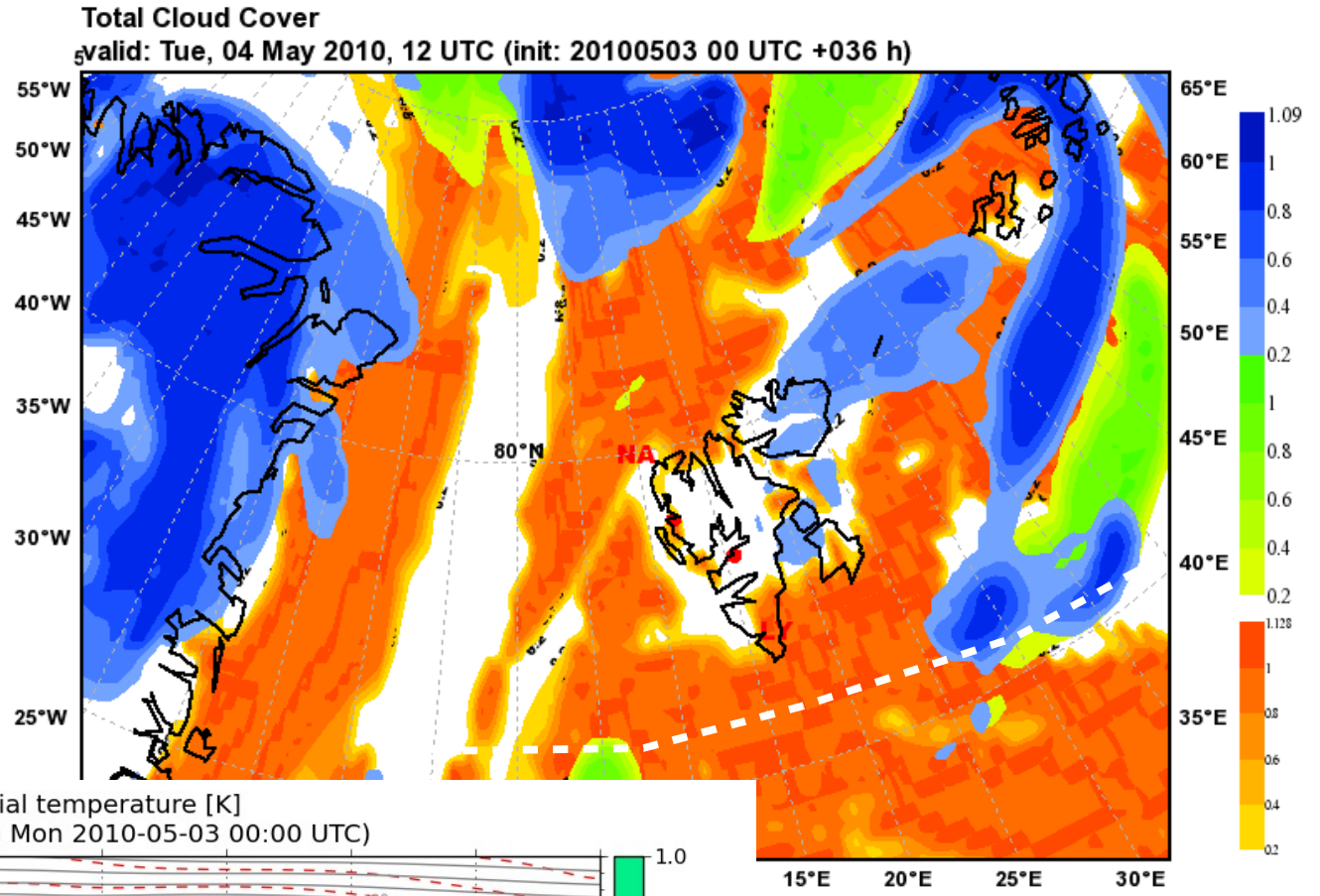
DLR ECMWF



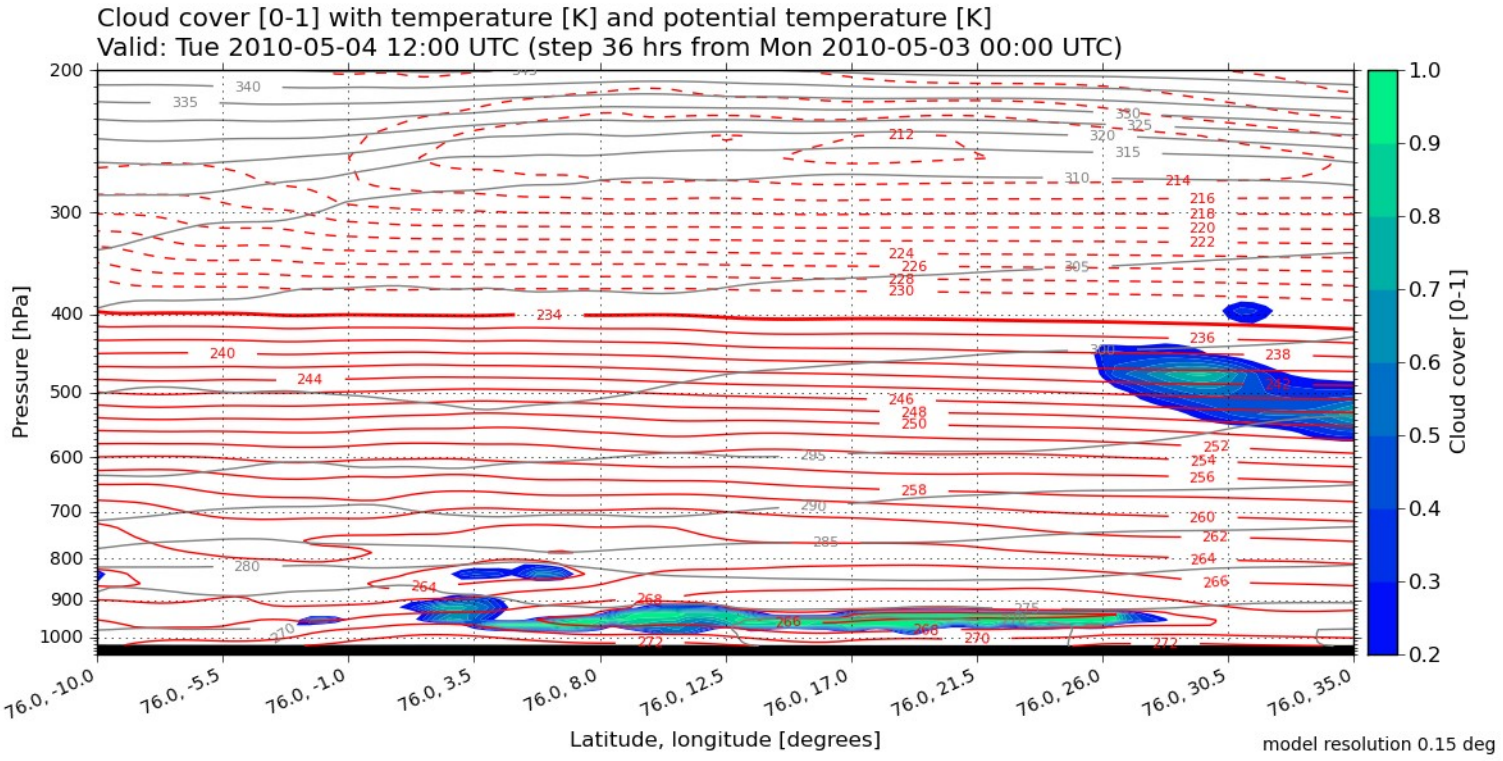
E-W along 76N



DLR ECMWF



E-W along 76N



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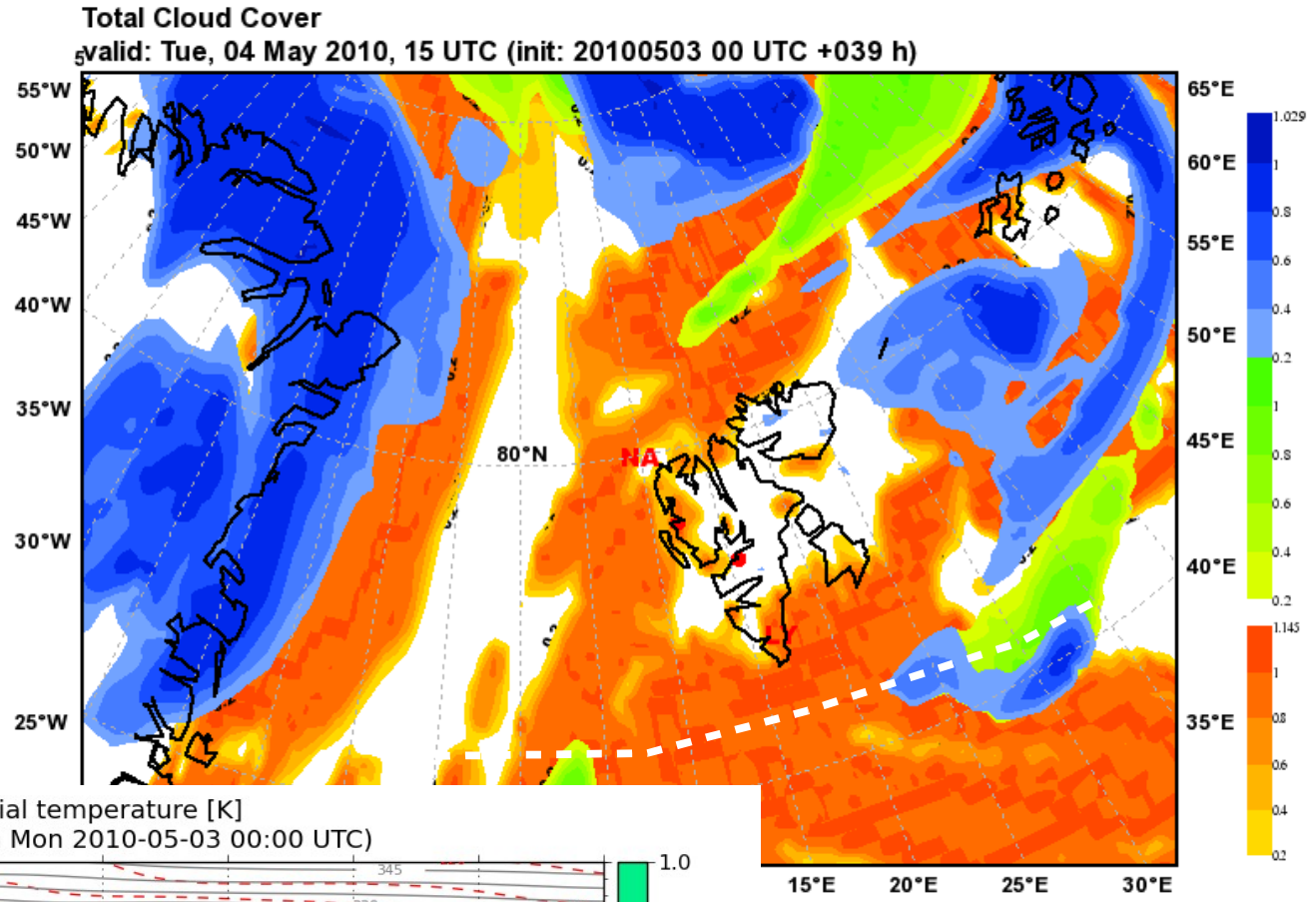
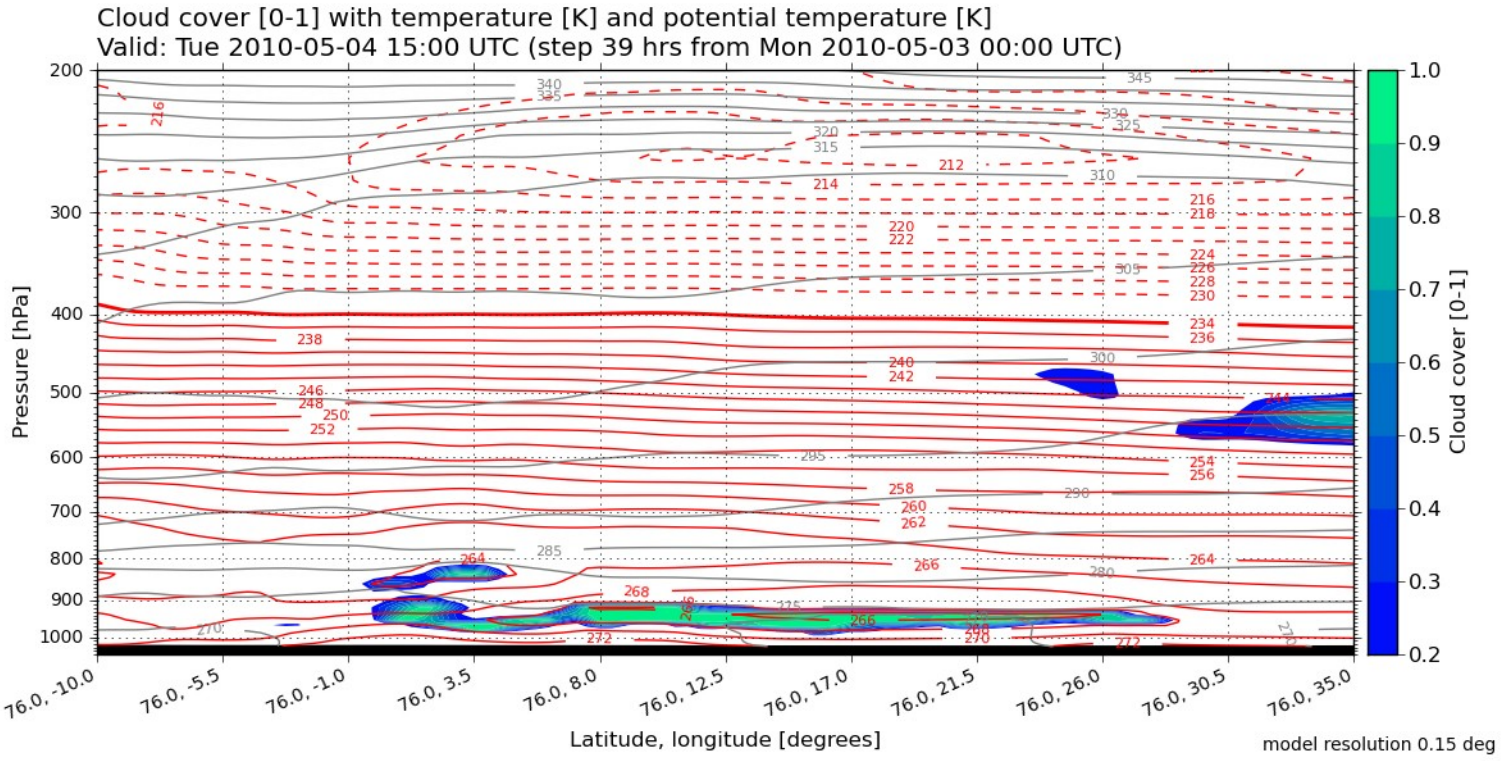


E-W along 76N



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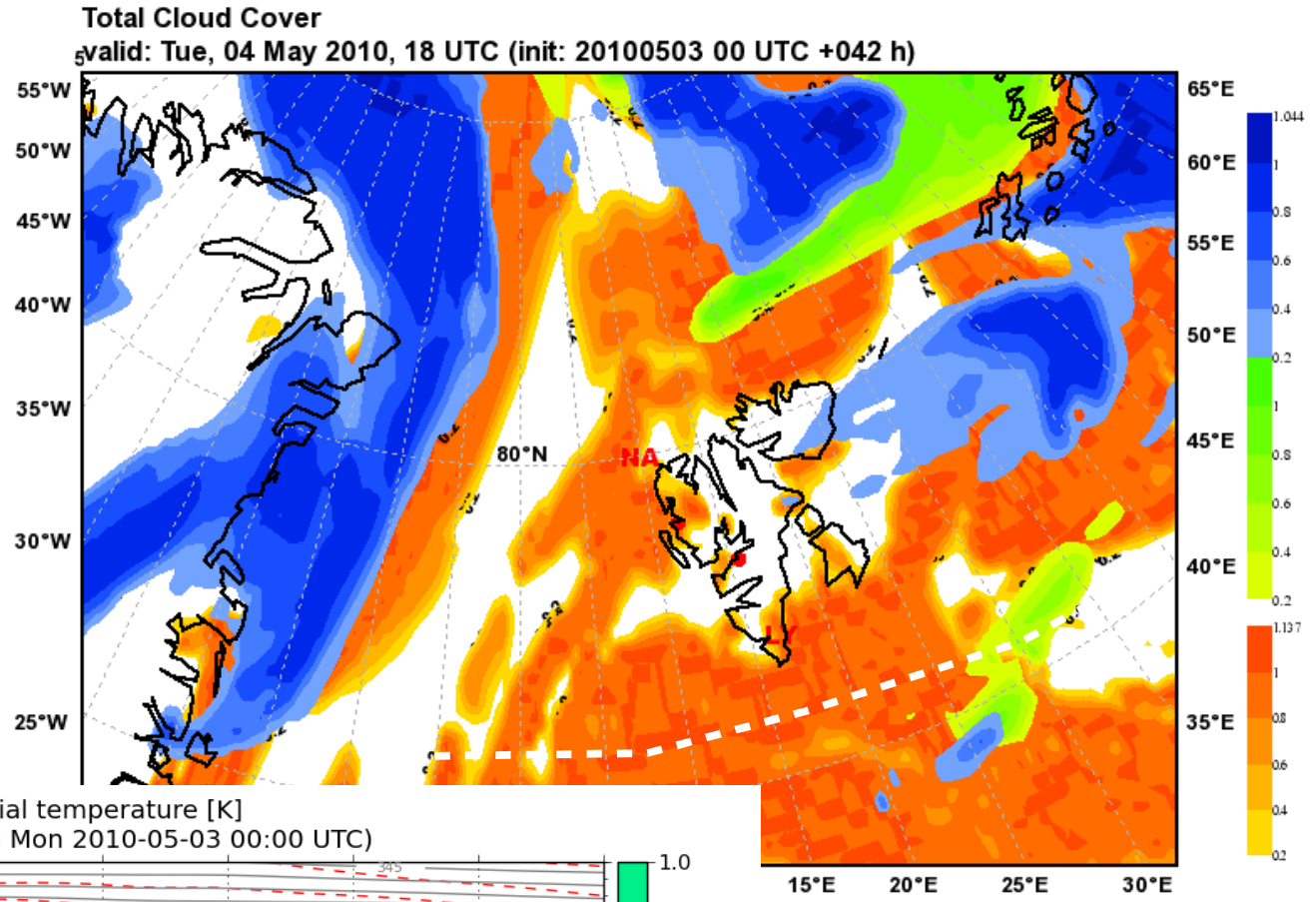
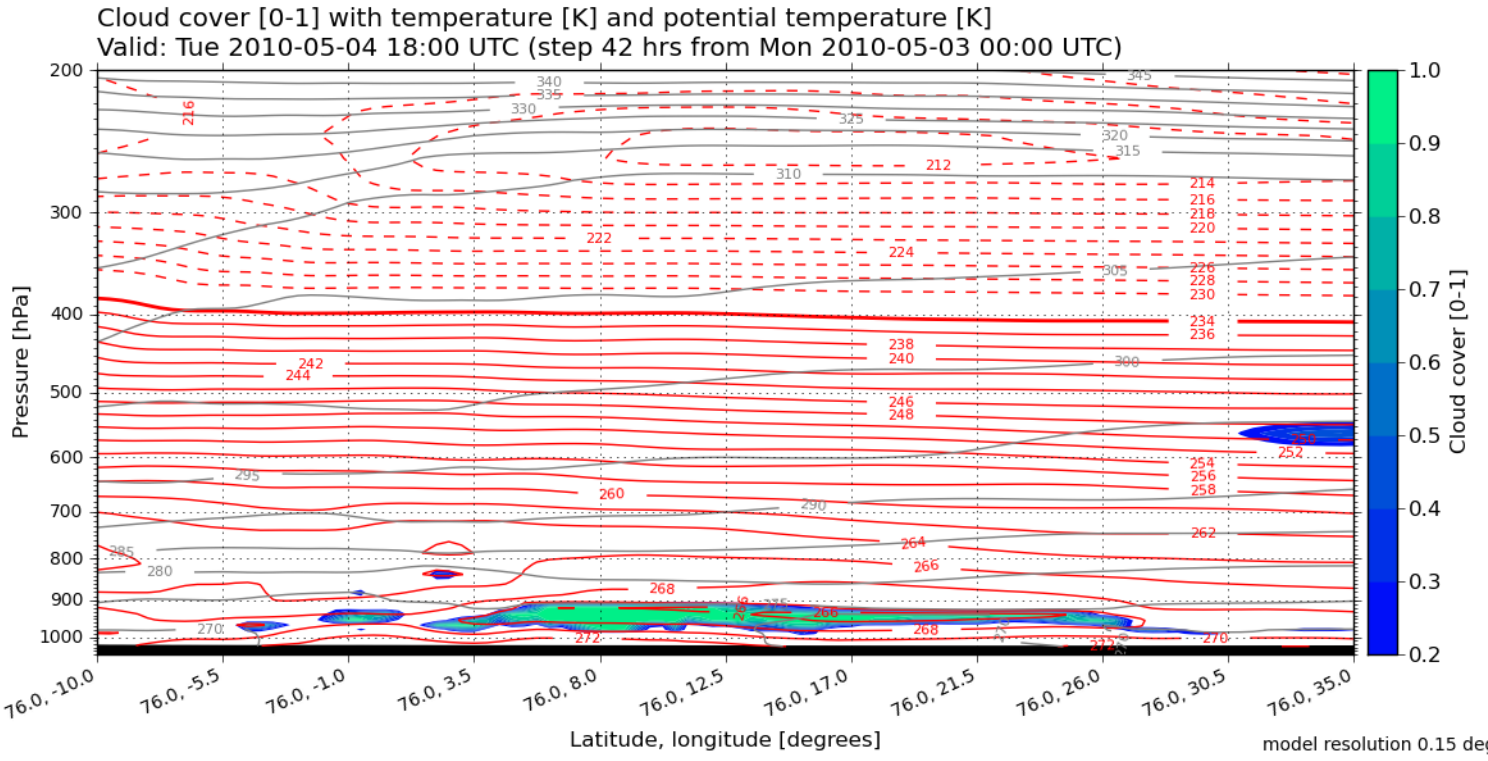
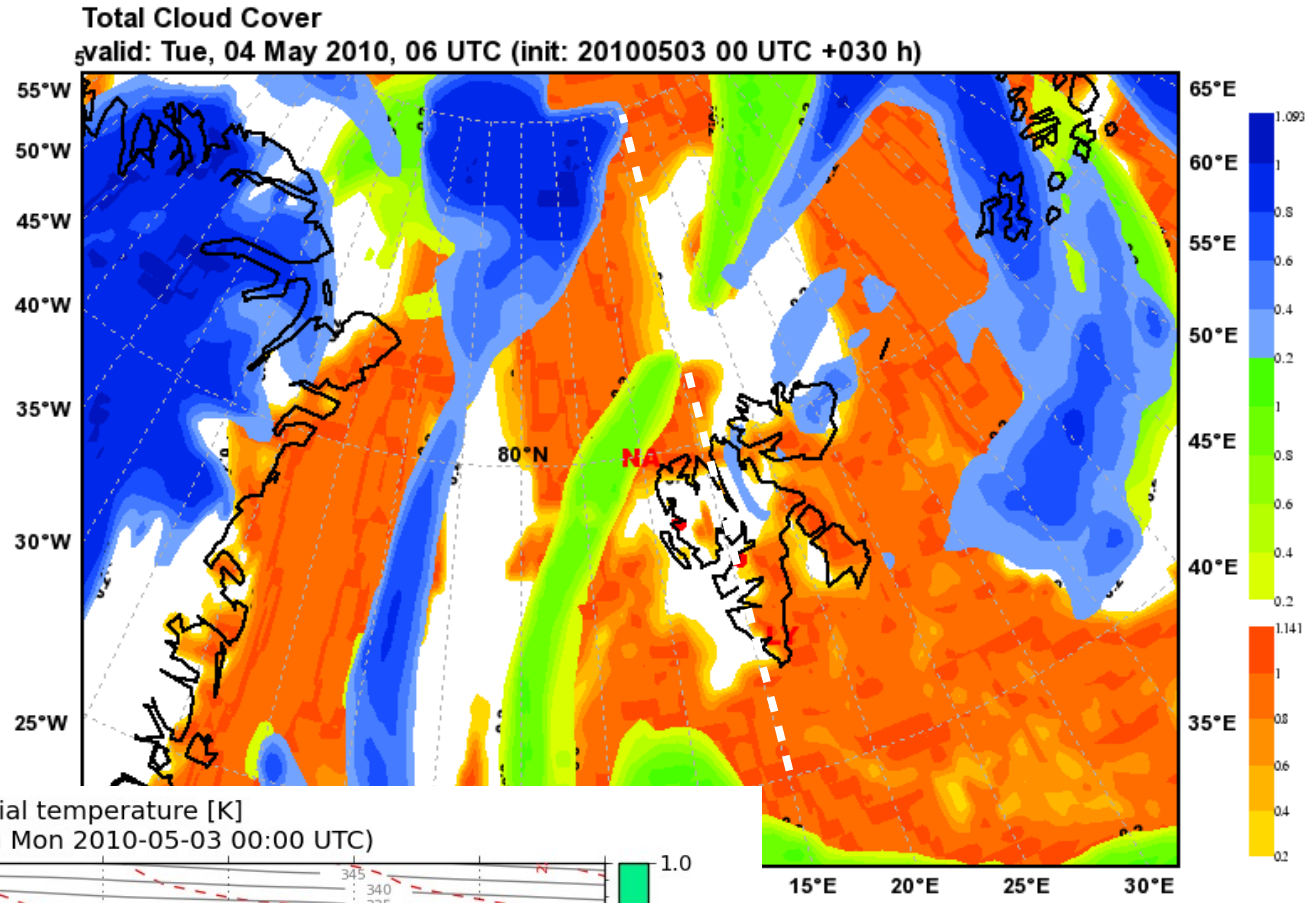


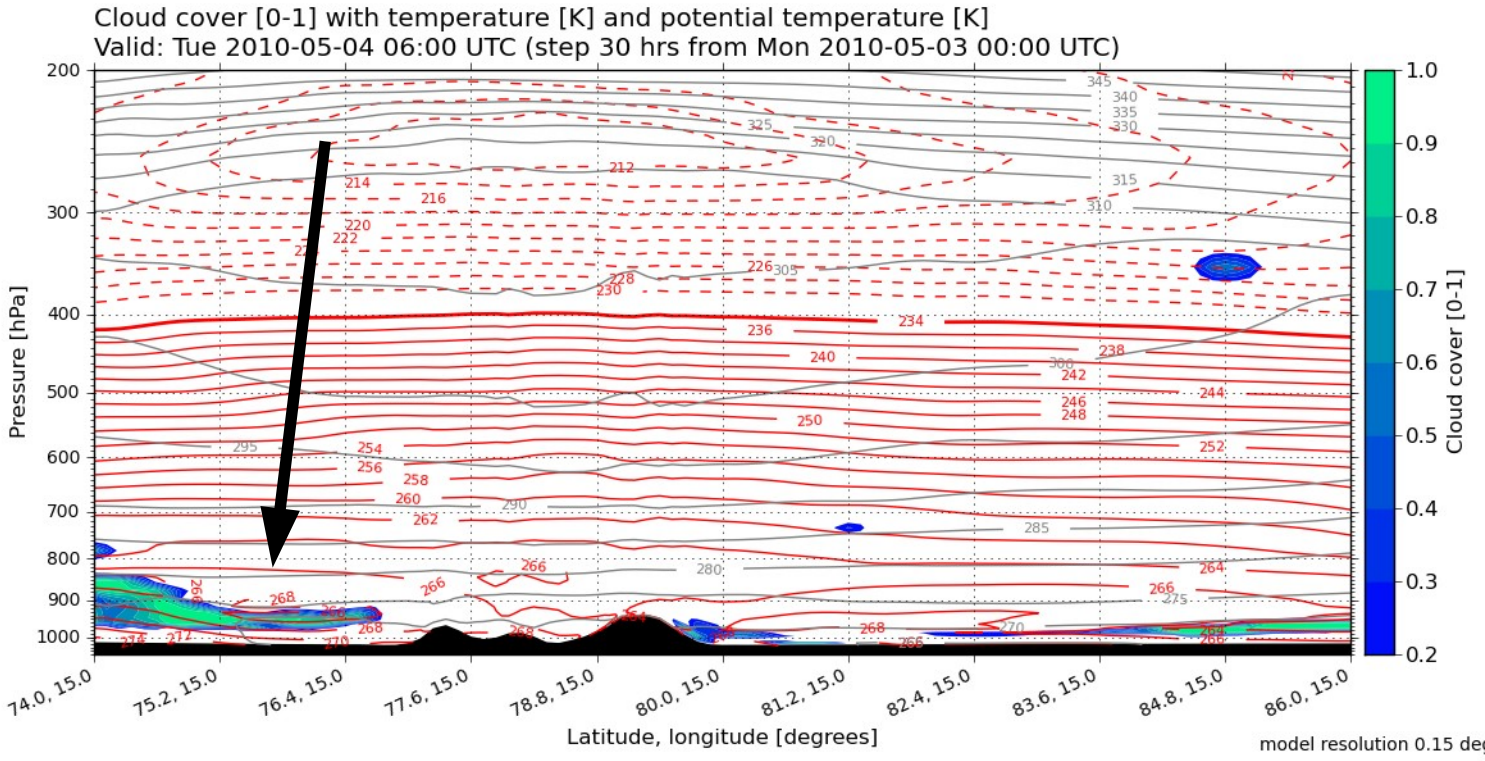
E-W along 76N



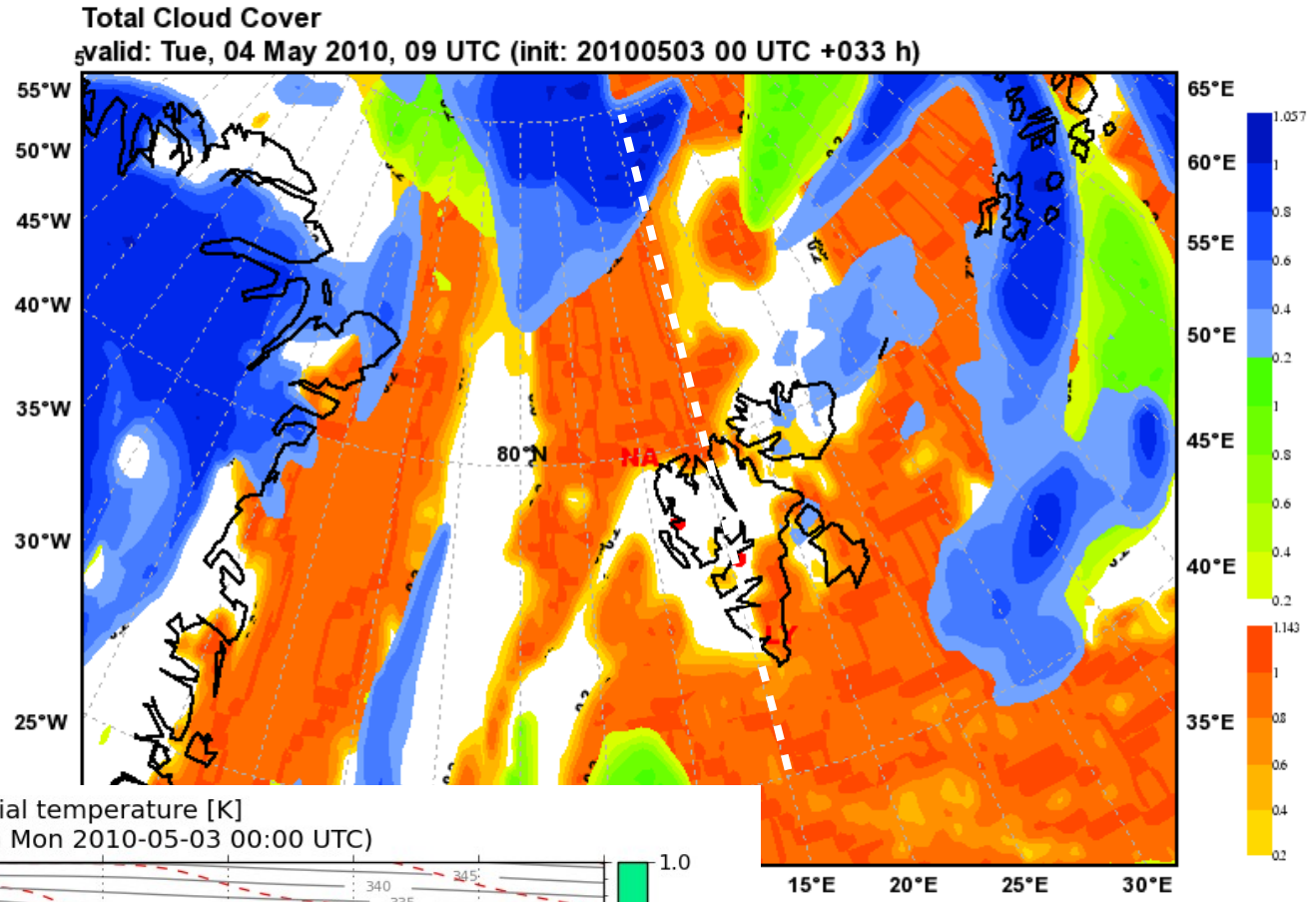
DLR ECMWF



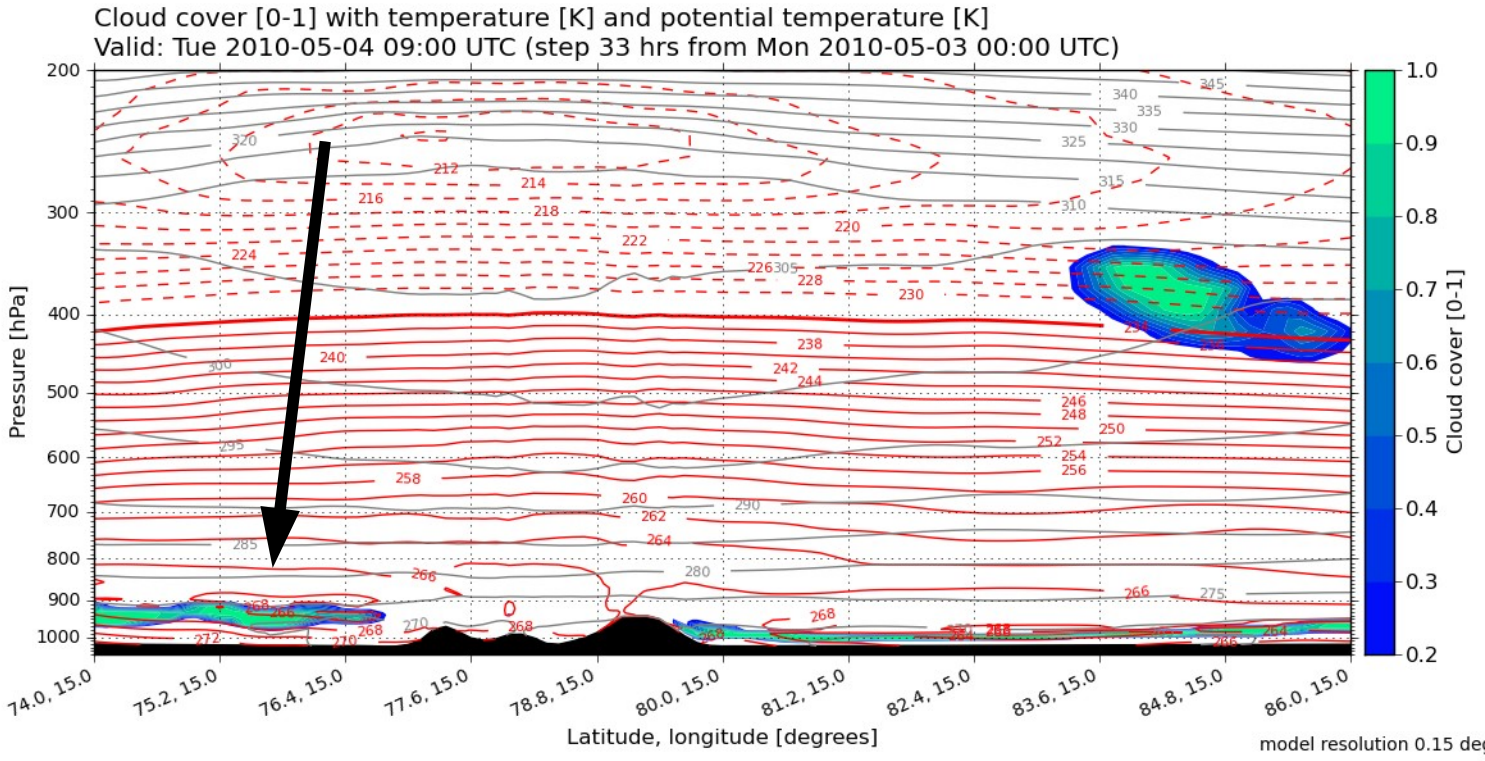
N-S along 15E



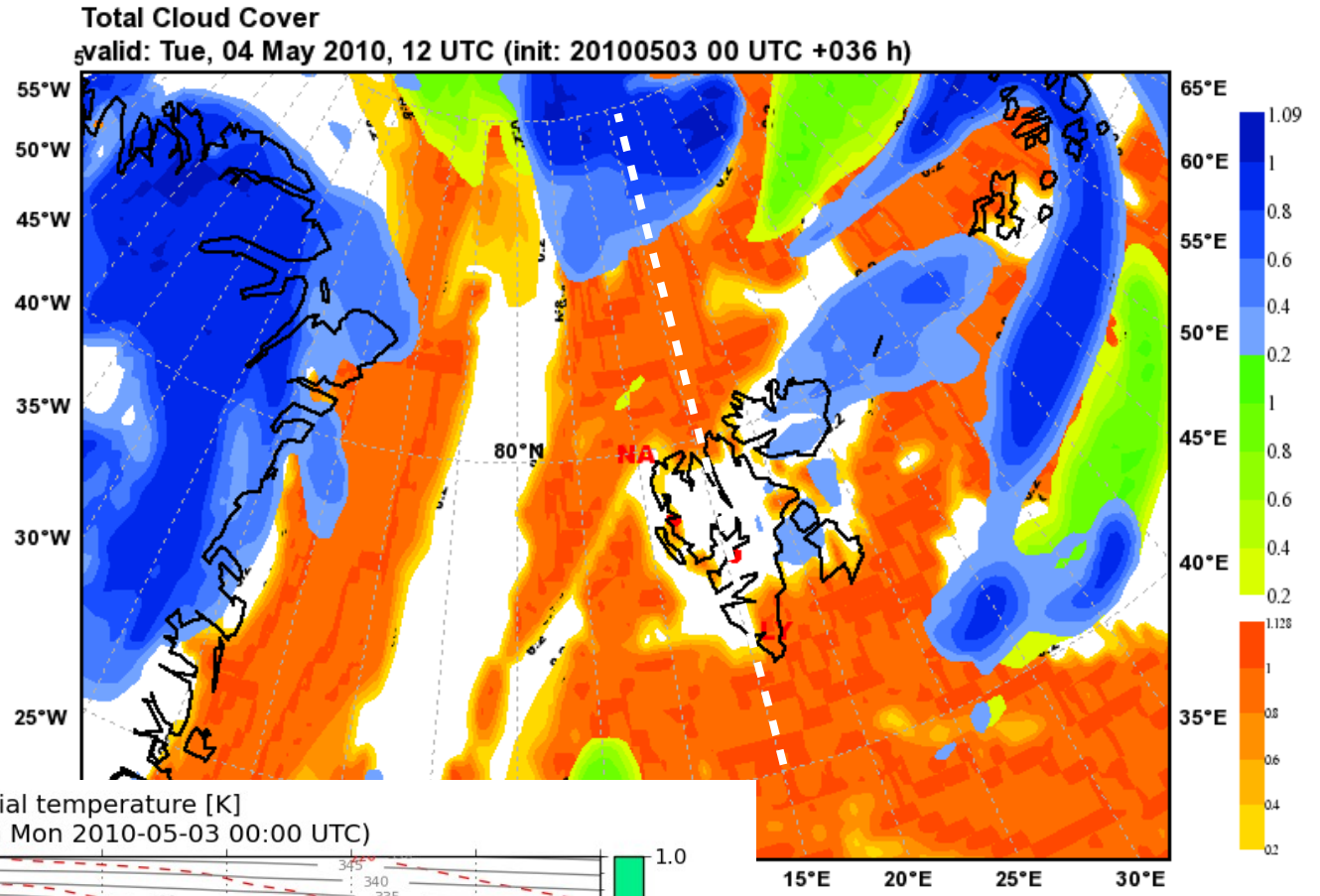
DLR ECMWF



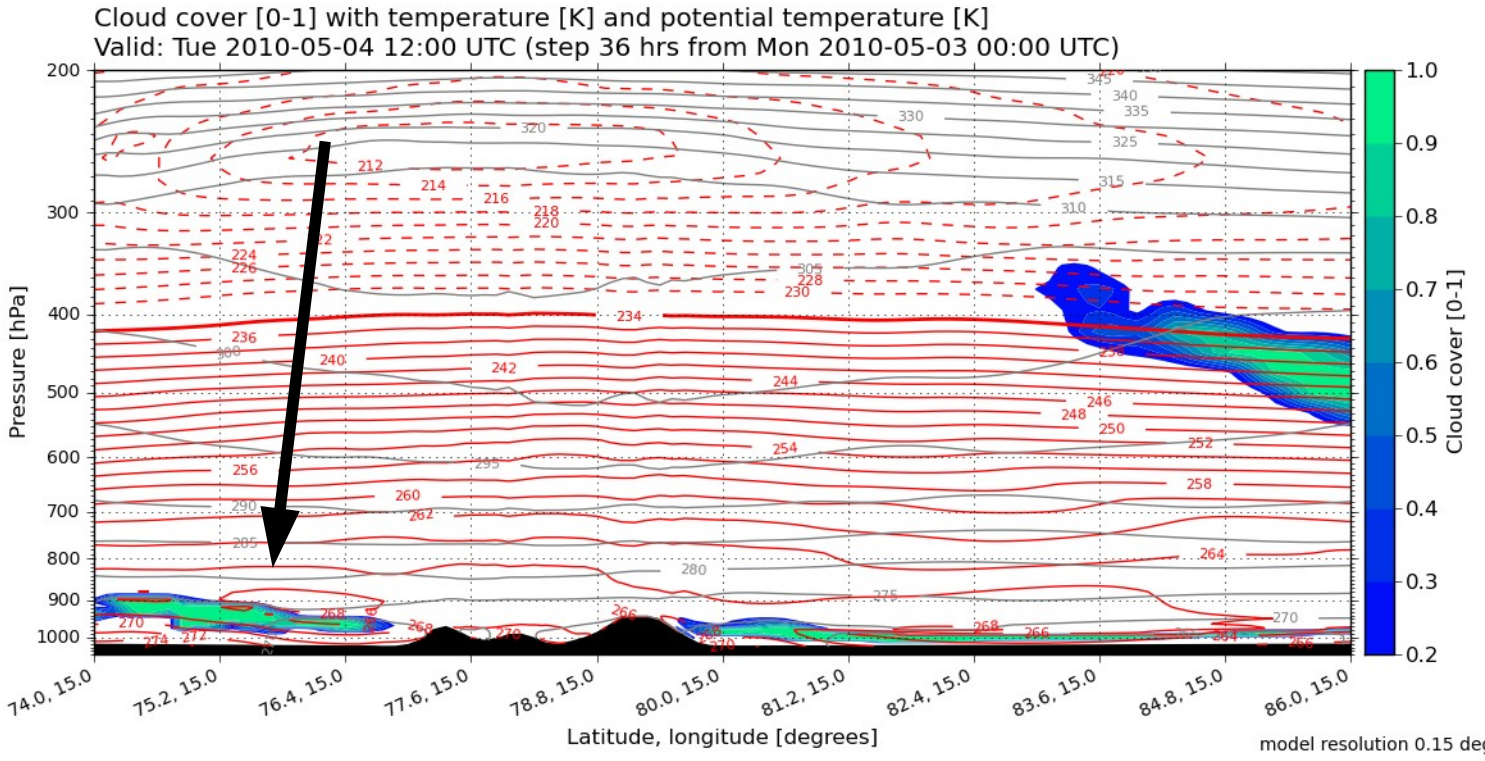
N-S along 15E



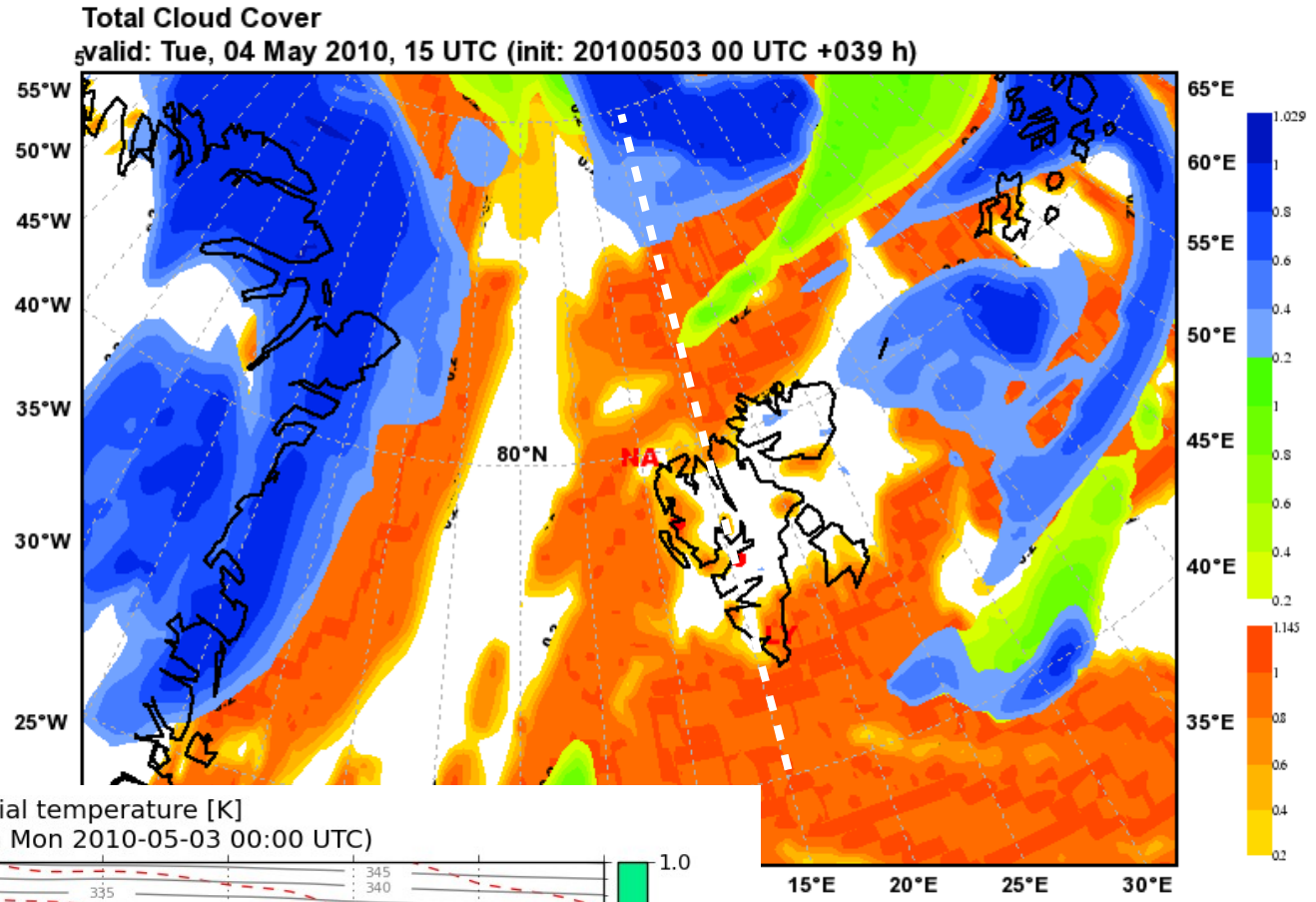
DLR ECMWF



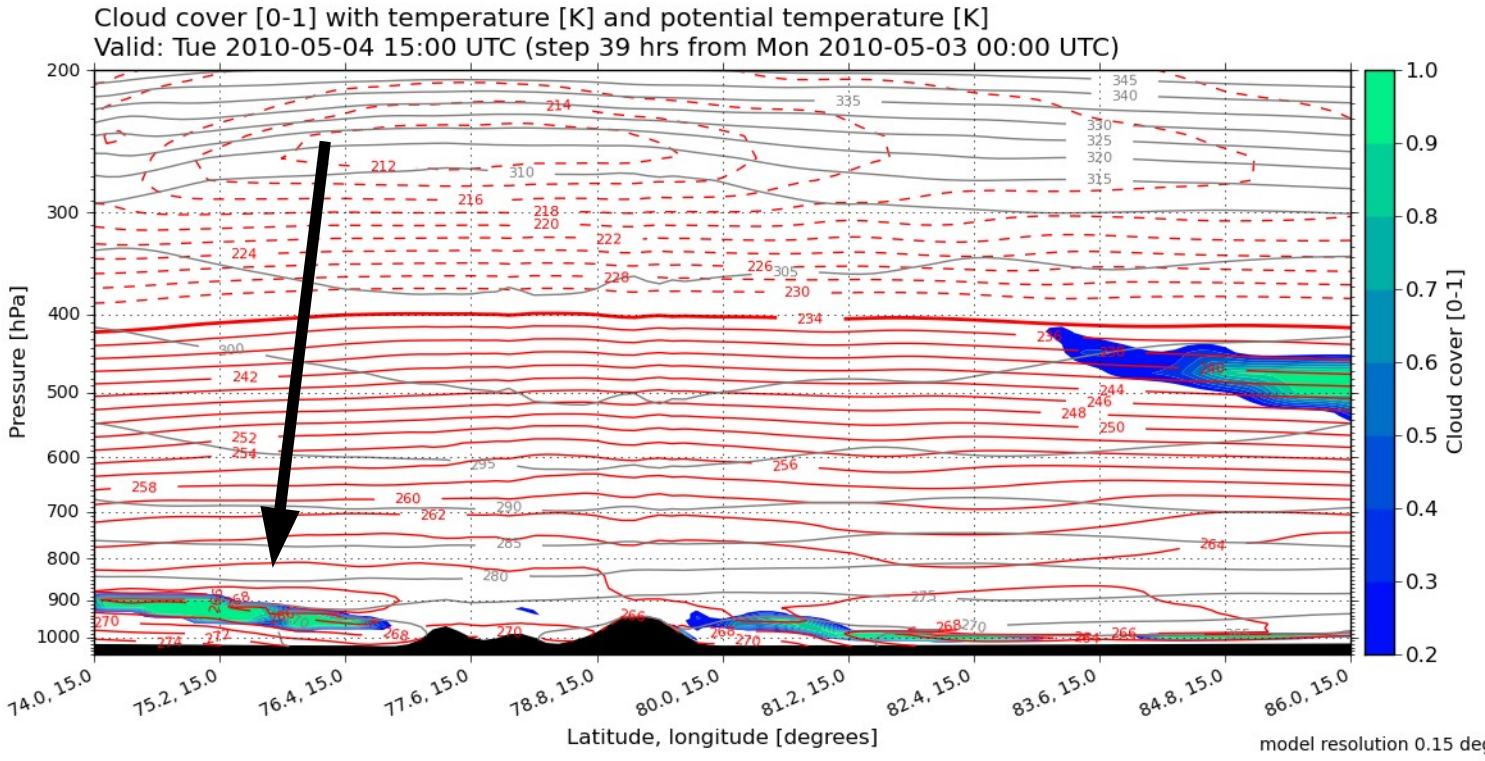
N-S along 15E



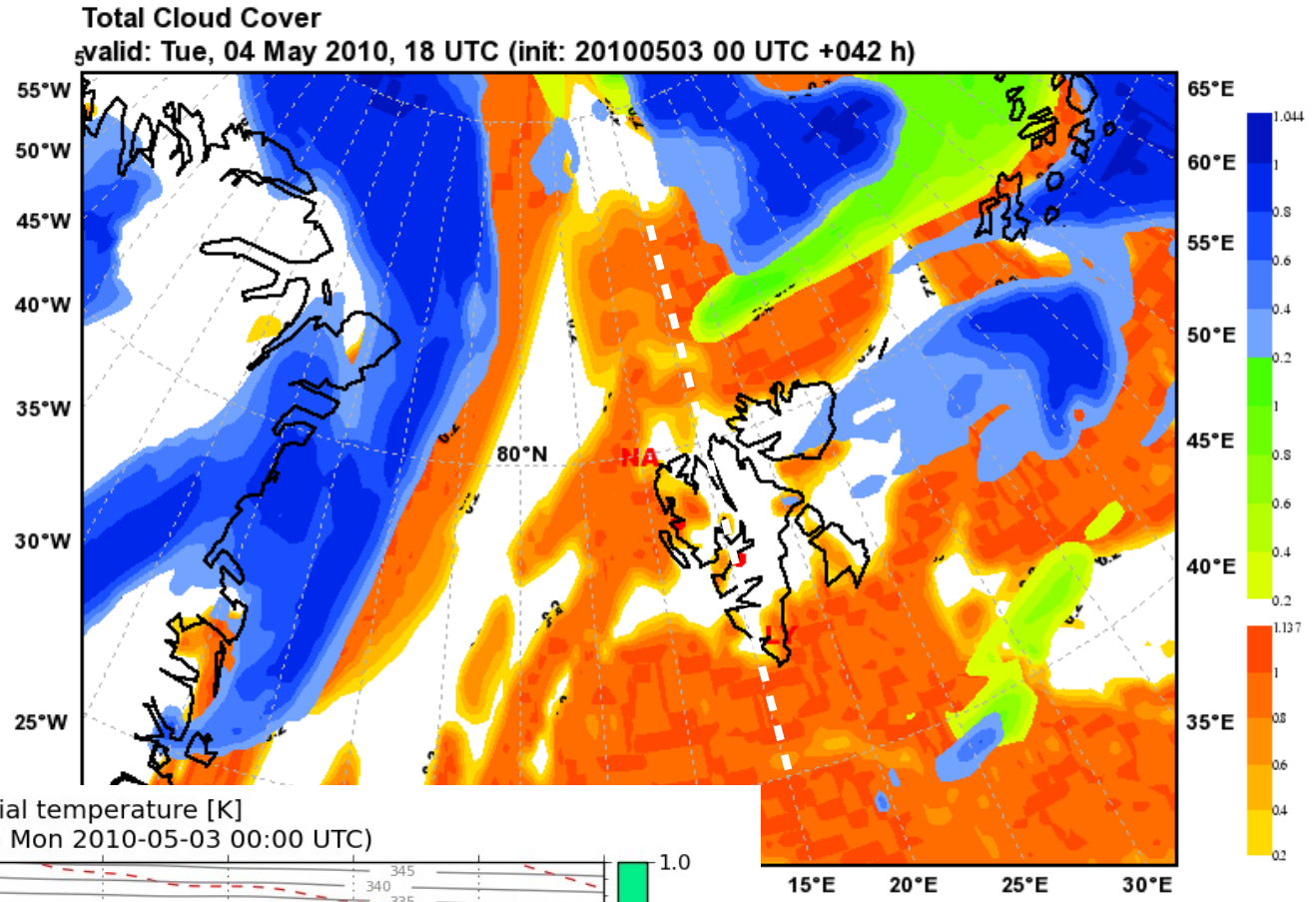
DLR ECMWF



N-S along 15E



DLR ECMWF



N-S along 15E