

# **Weather Forecast**

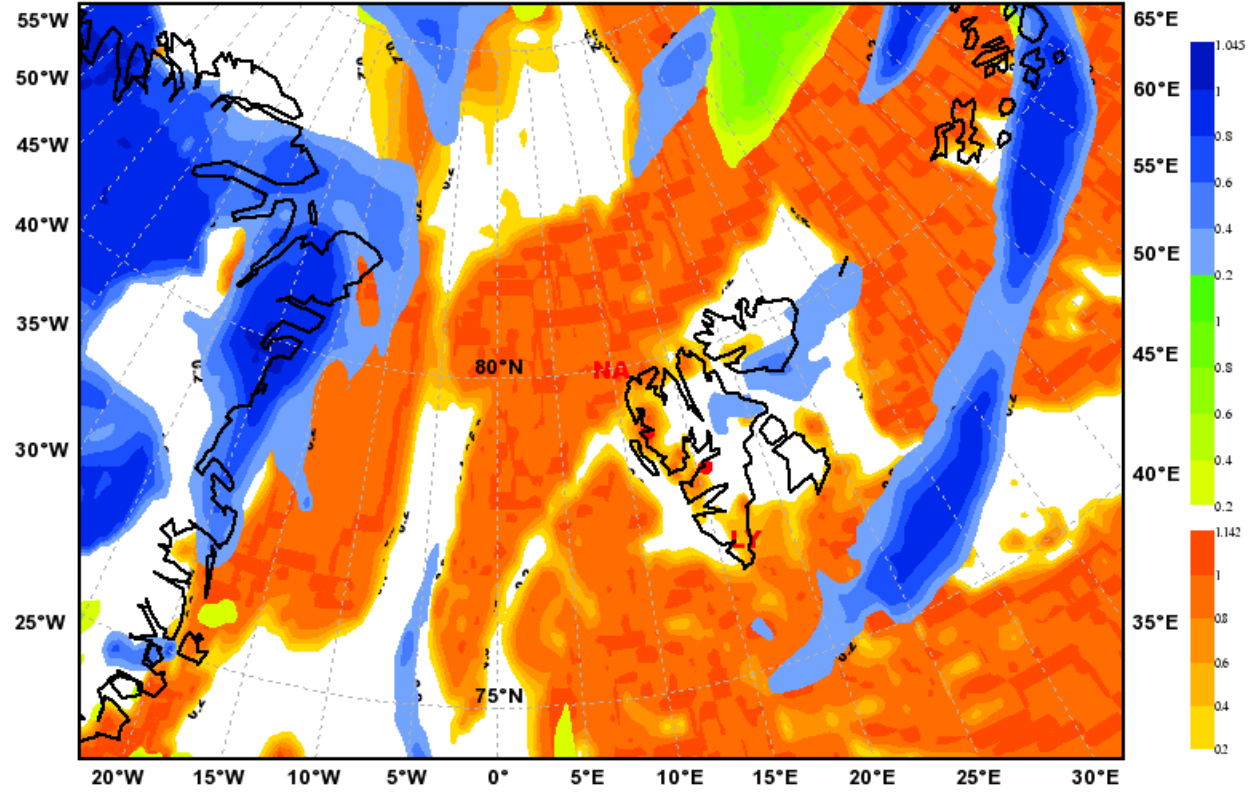
**Tuesday May 04, 2010**

**Marc Rautenhaus, DLR/IPA**

# Satellite vs. ECMWF clouds

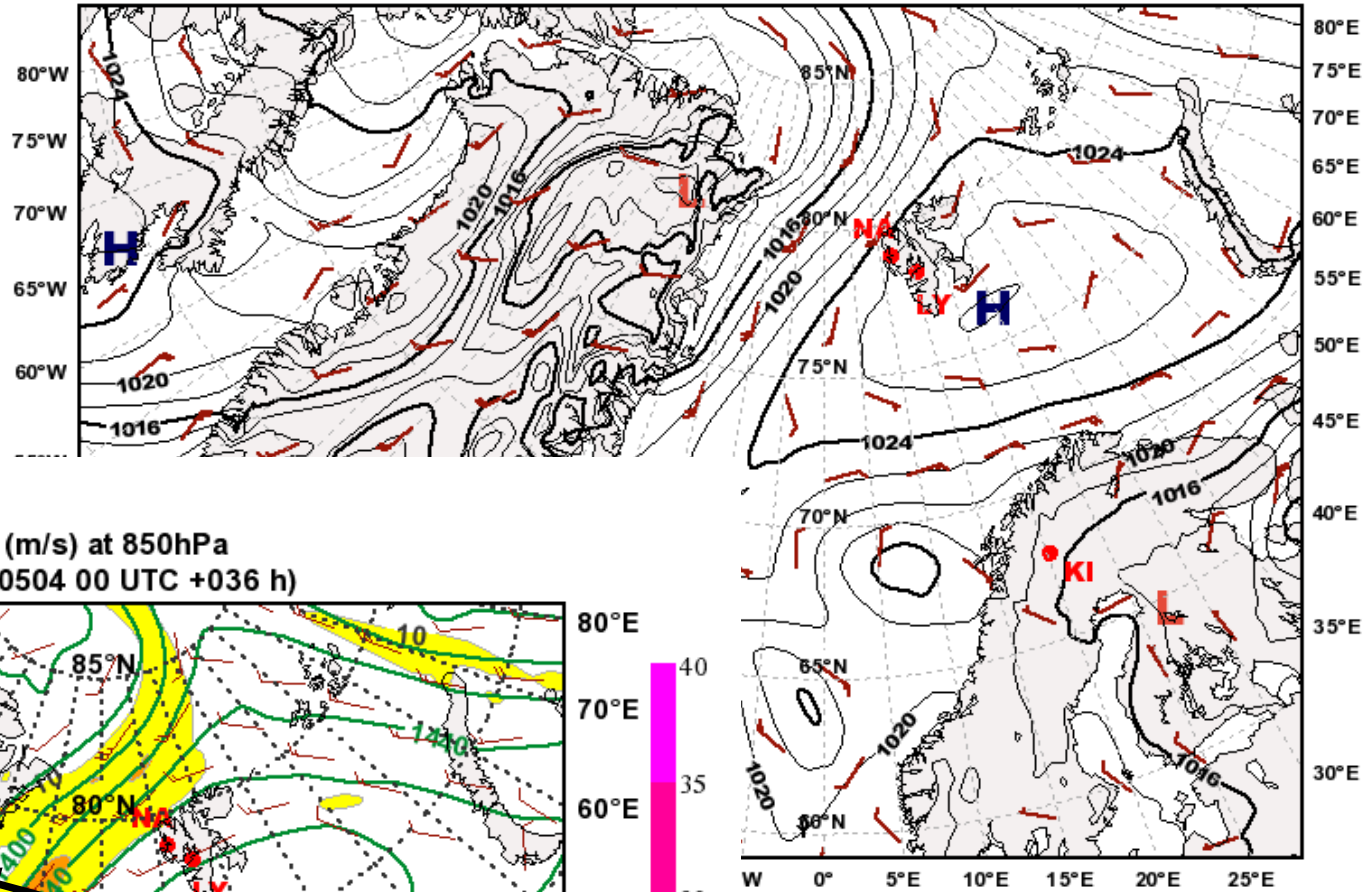
12 UTC (14 local)

Total Cloud Cover  
valid: Tue, 04 May 2010, 12 UTC (init: 20100504 00 UTC +012 h)

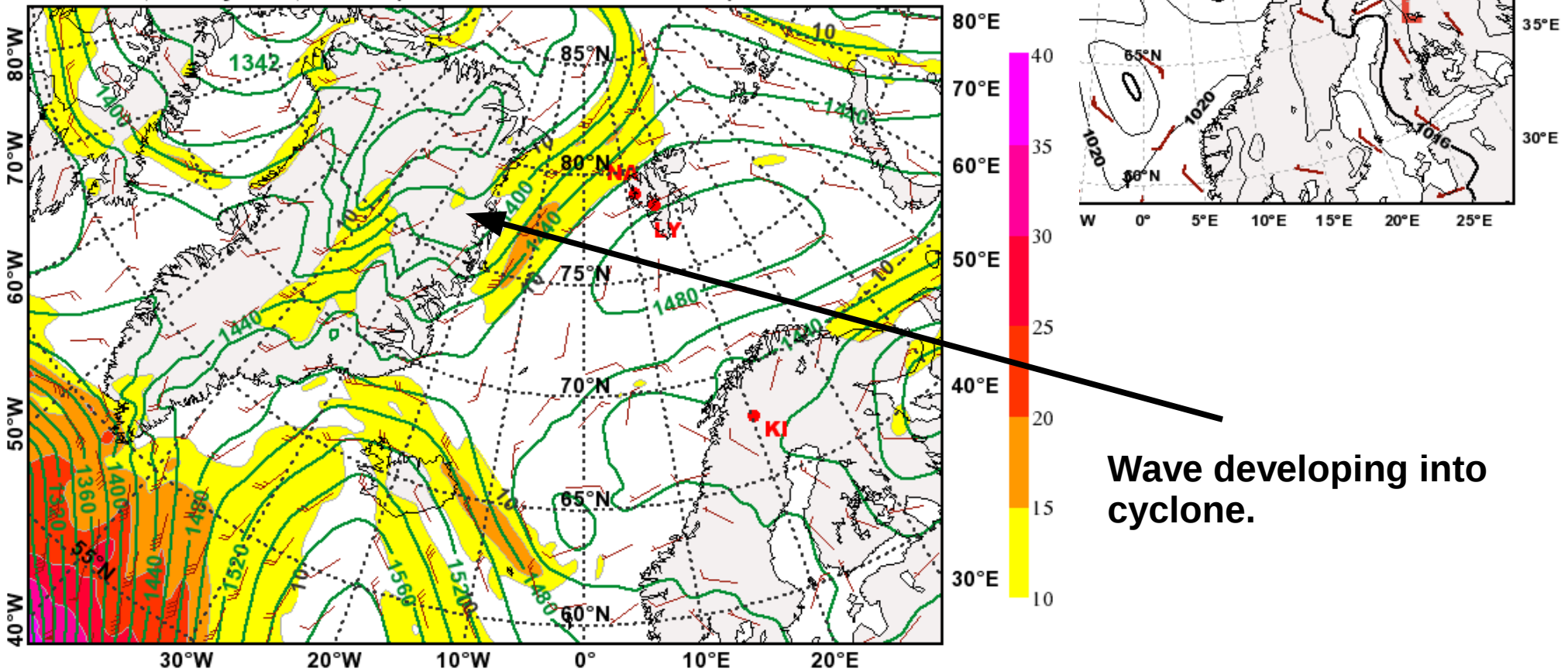


# Development Wed - Sat

Wednesday still  
under high  
pressure influence.

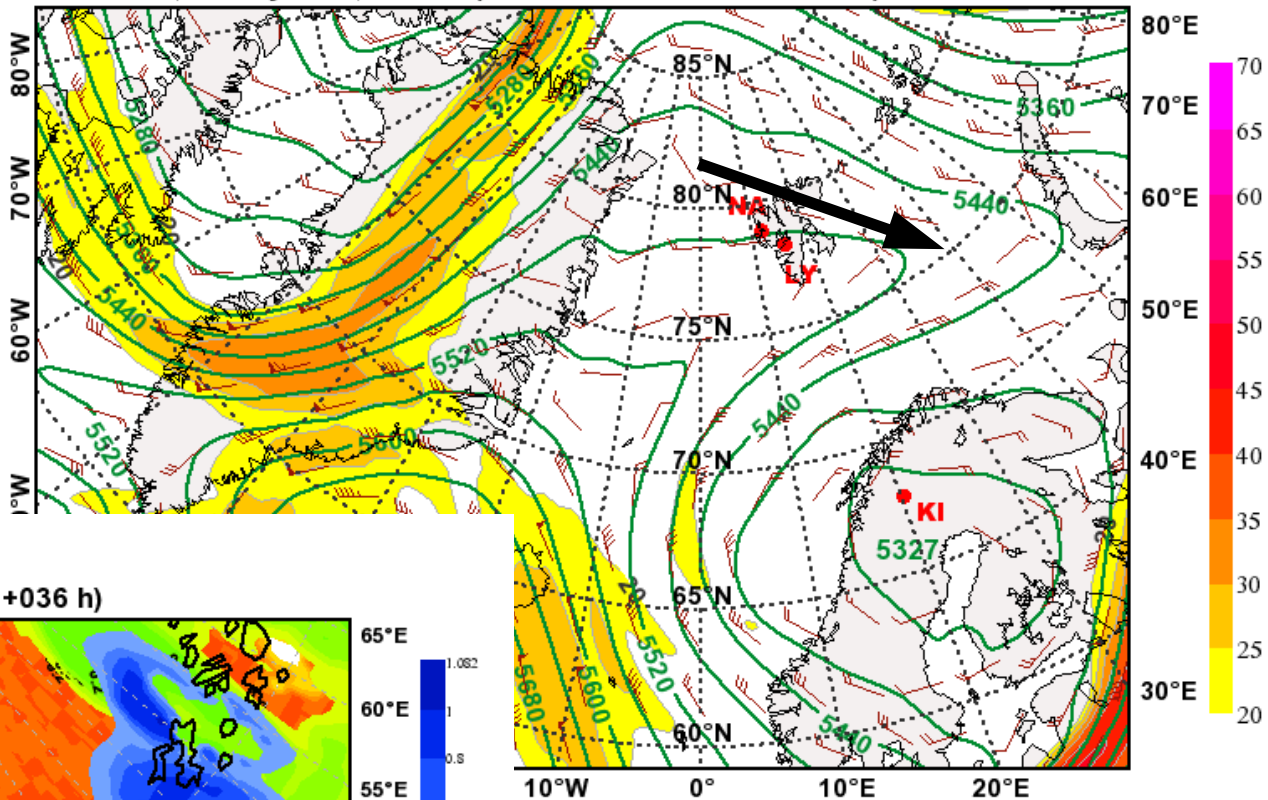


Geopotential Height (m) & Horizontal Wind (m/s) at 850hPa  
valid: Wed, 05 May 2010, 12 UTC (init: 20100504 00 UTC +036 h)

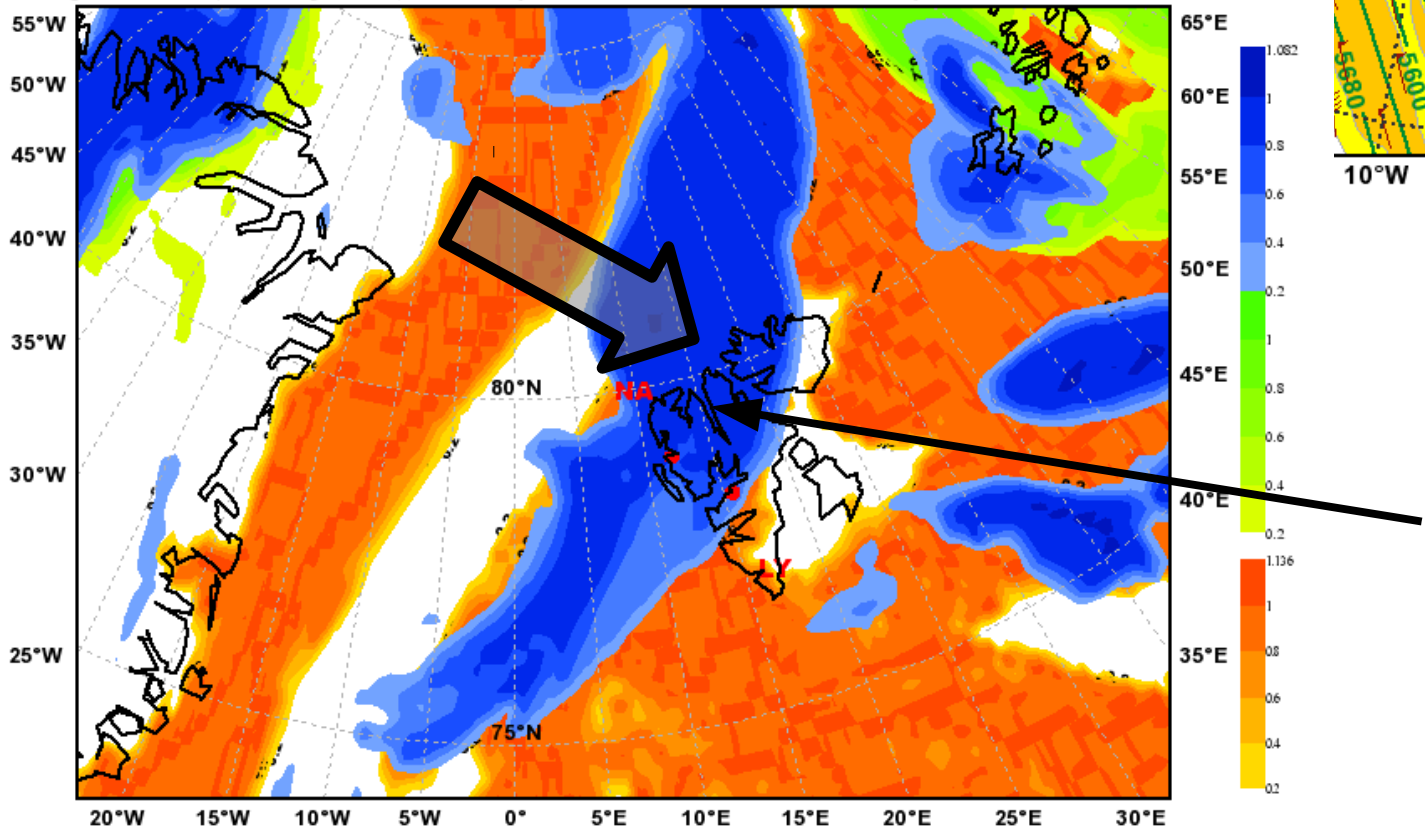


Wave developing into  
cyclone.

Geopotential Height (m) & Horizontal Wind (m/s) at 500hPa  
 valid: Wed, 05 May 2010, 12 UTC (init: 20100504 00 UTC +036 h)



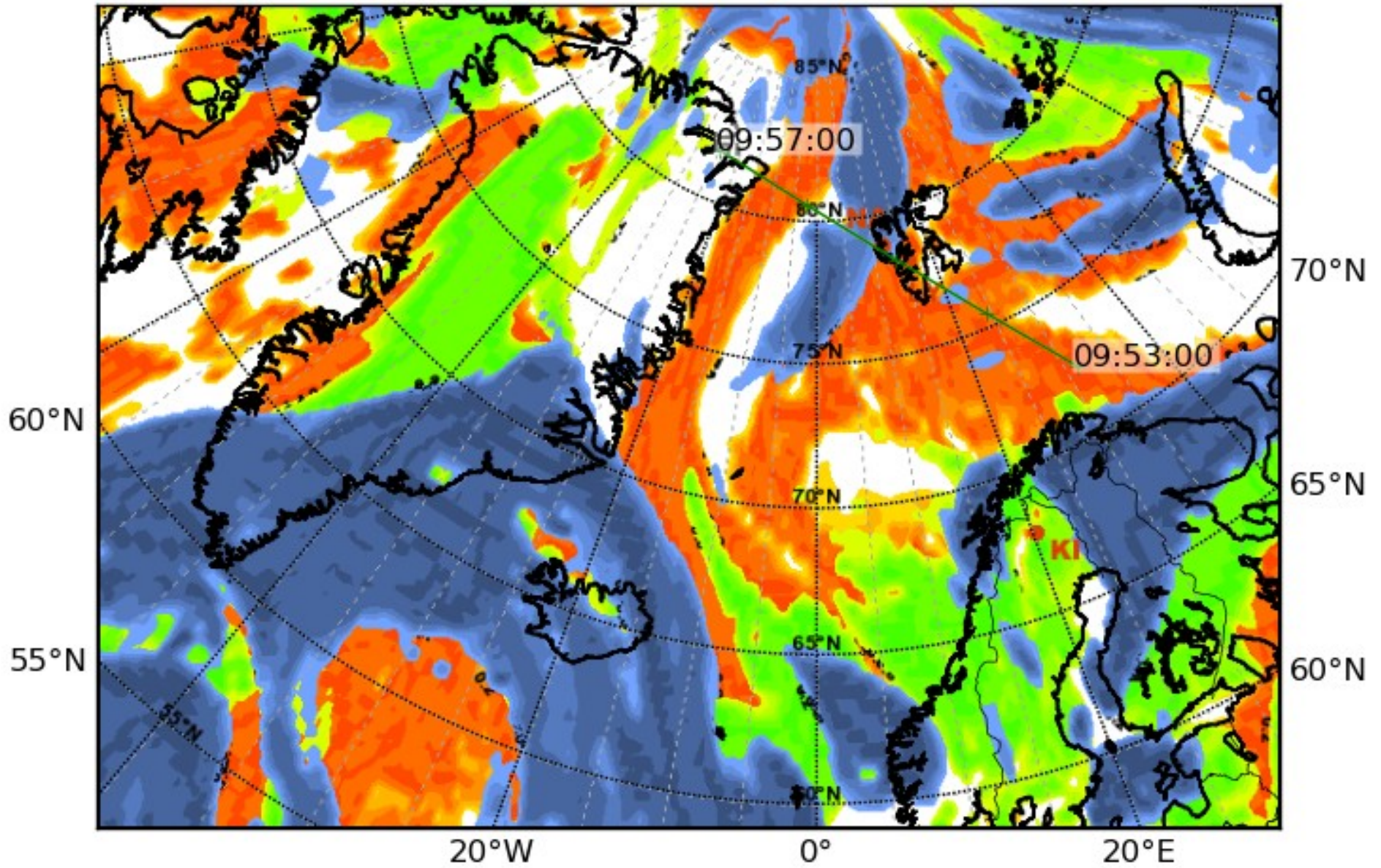
Total Cloud Cover  
 valid: Wed, 05 May 2010, 12 UTC (init: 20100504 00 UTC +036 h)



**Cirrus band crosses Svalbard.**

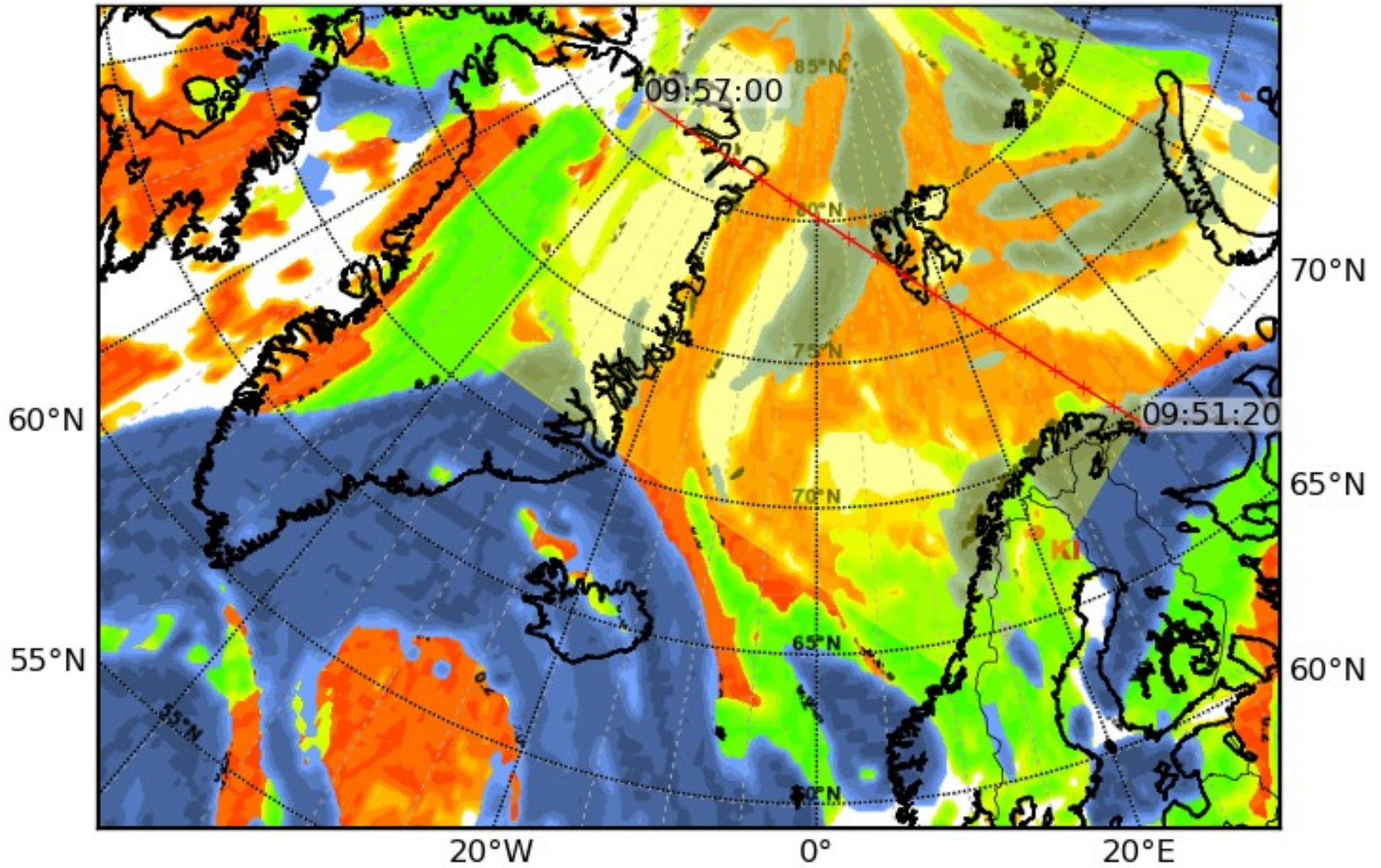


### CLOUDSAT overpass (clouds 09 UTC)

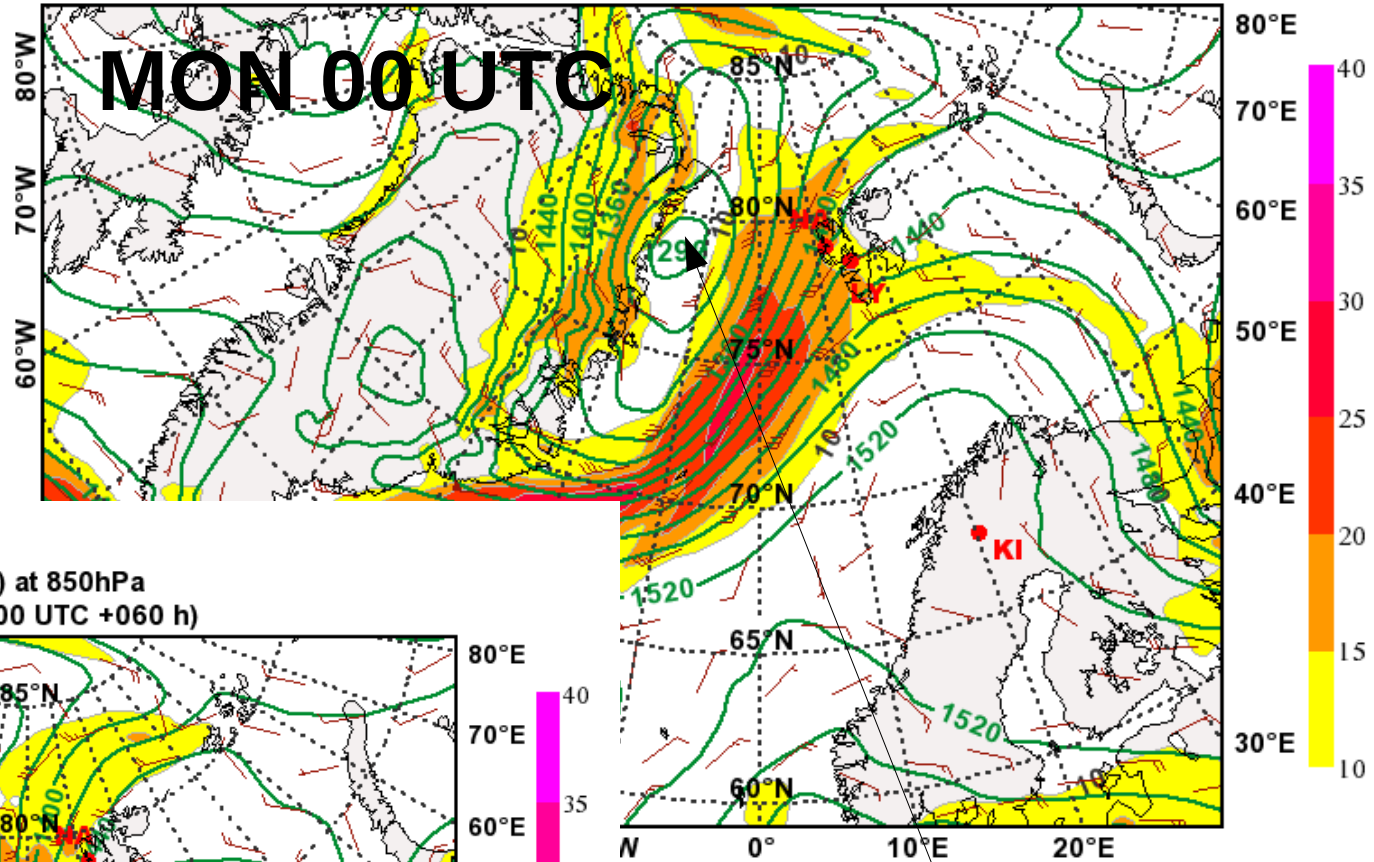




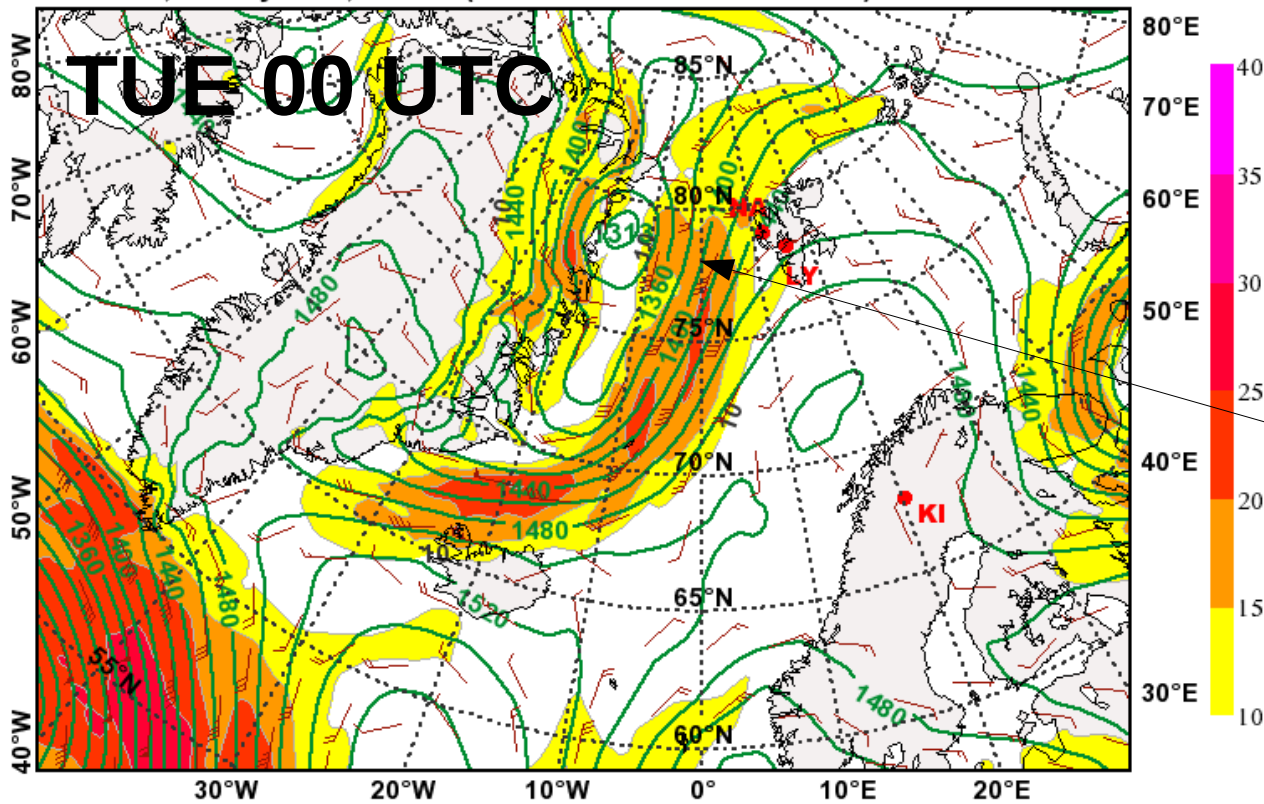
### AQUA overpass (clouds 09 UTC)



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



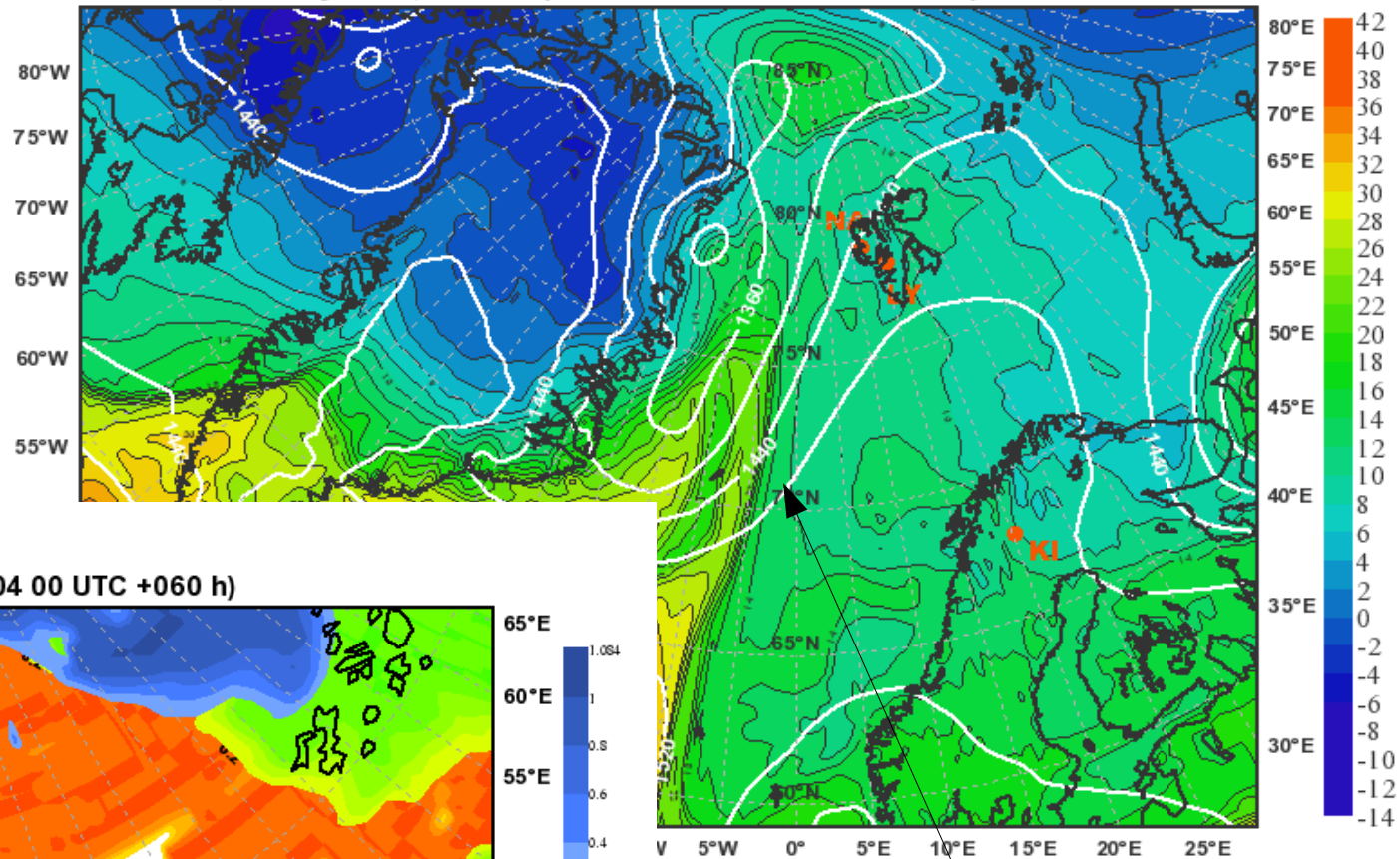
Geopotential Height (m) & Horizontal Wind (m/s) at 850hPa  
valid: Thu, 06 May 2010, 12 UTC (init: 20100504 00 UTC +060 h)



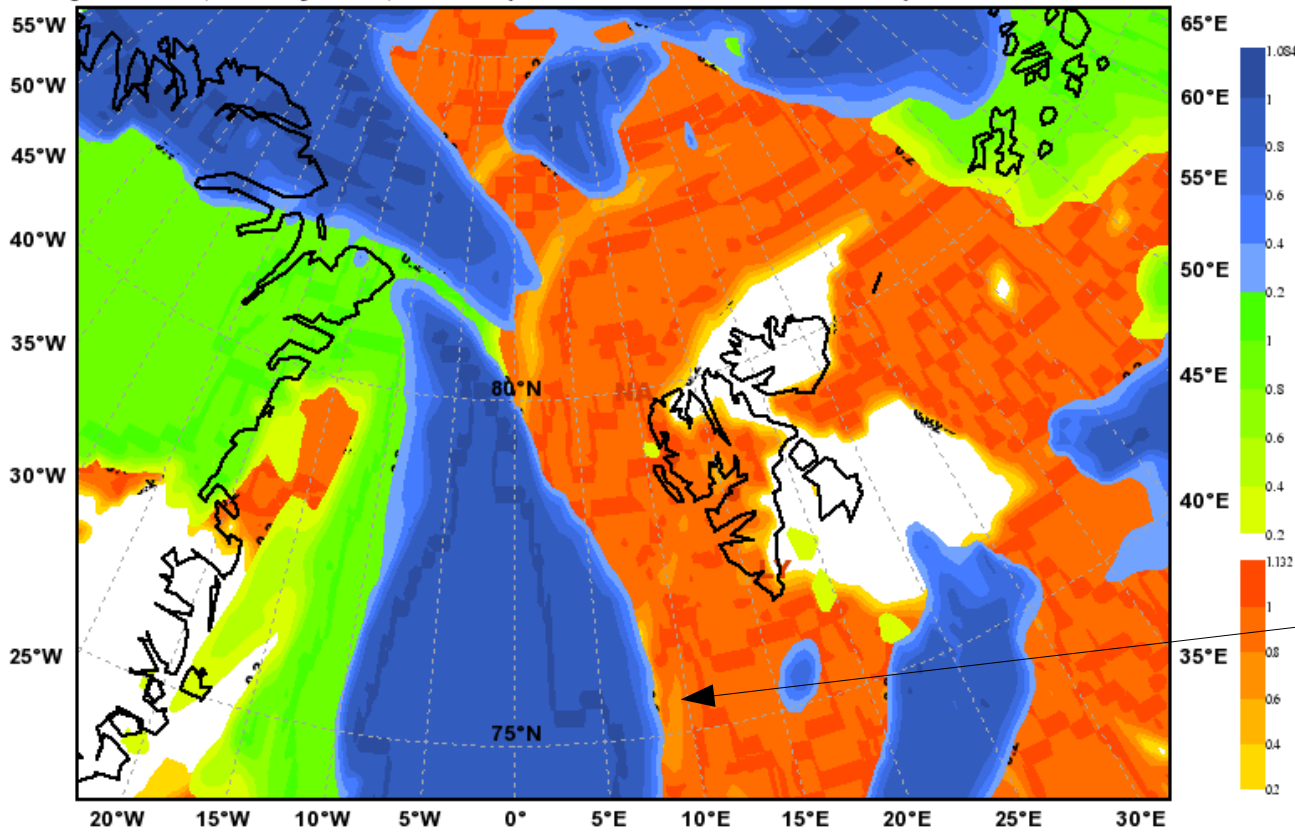
Low pressure system a little bit weaker in the new forecast.



Equivalent Potential Temperature [°C] & Geopot. Height [m] at 850hPa  
 valid: Thu, 06 May 2010, 12 UTC (init: 20100504 00 UTC +060 h)



Total Cloud Cover  
 valid: Thu, 06 May 2010, 12 UTC (init: 20100504 00 UTC +060 h)

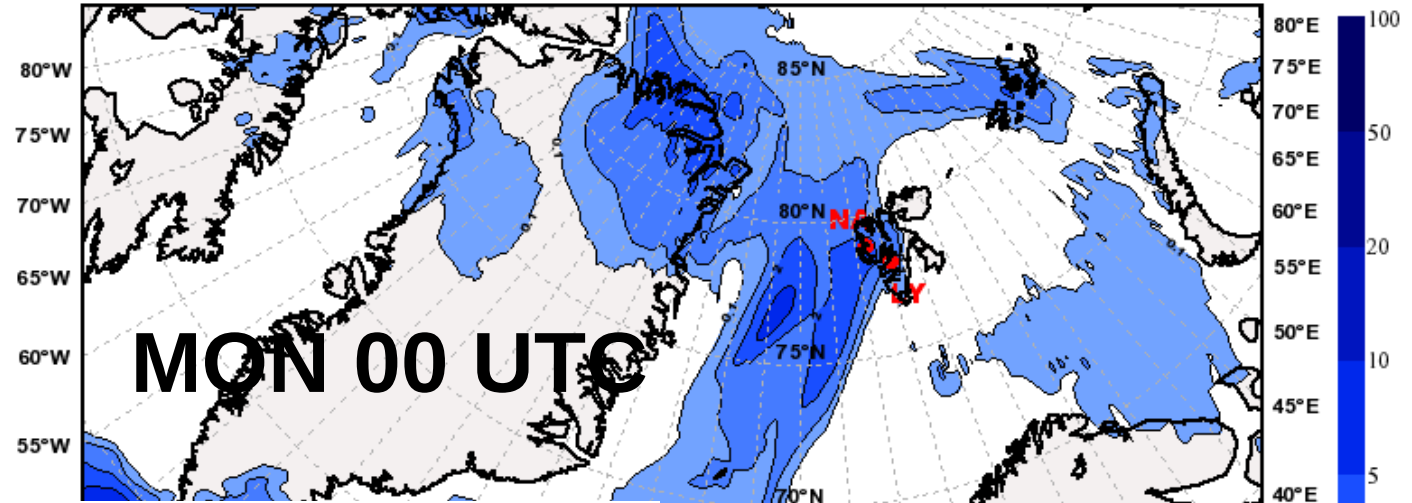


Front

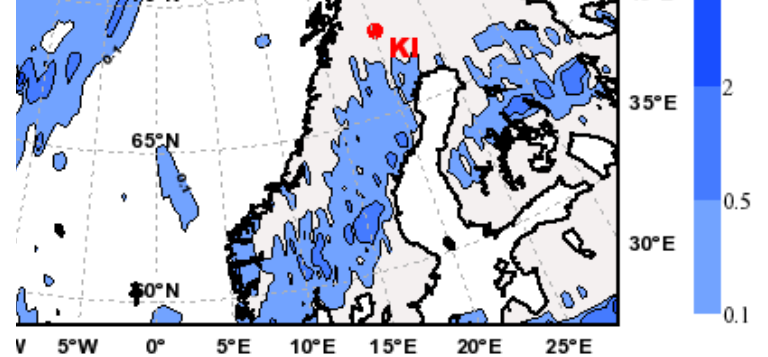
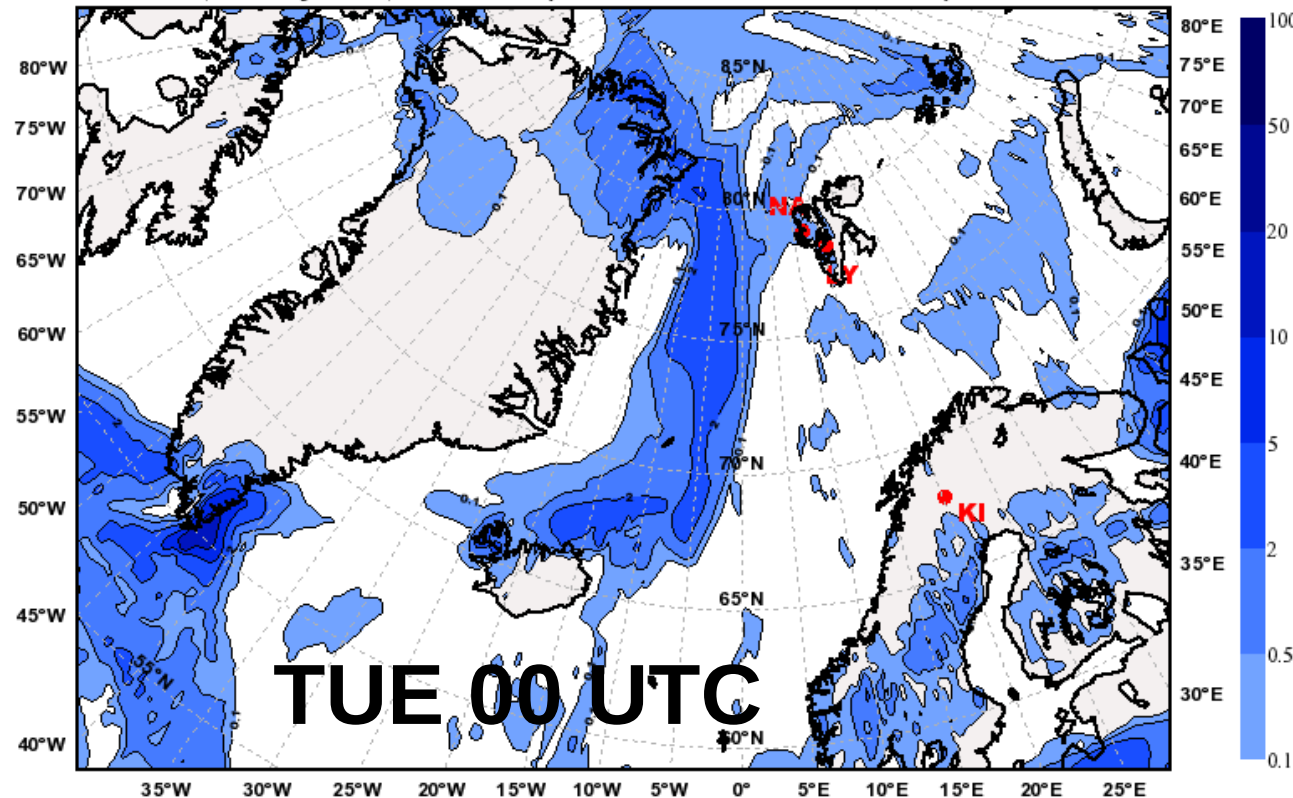
**Warm front arrives  
Thursday  
evening/night, but later  
in today's forecast.**

**(arrival between 15 and  
18 UTC)**

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



**Total Precipitation [mm]**  
valid: Thu, 06 May 2010, 12-18 UTC (init: 20100504 00 UTC +066 h)

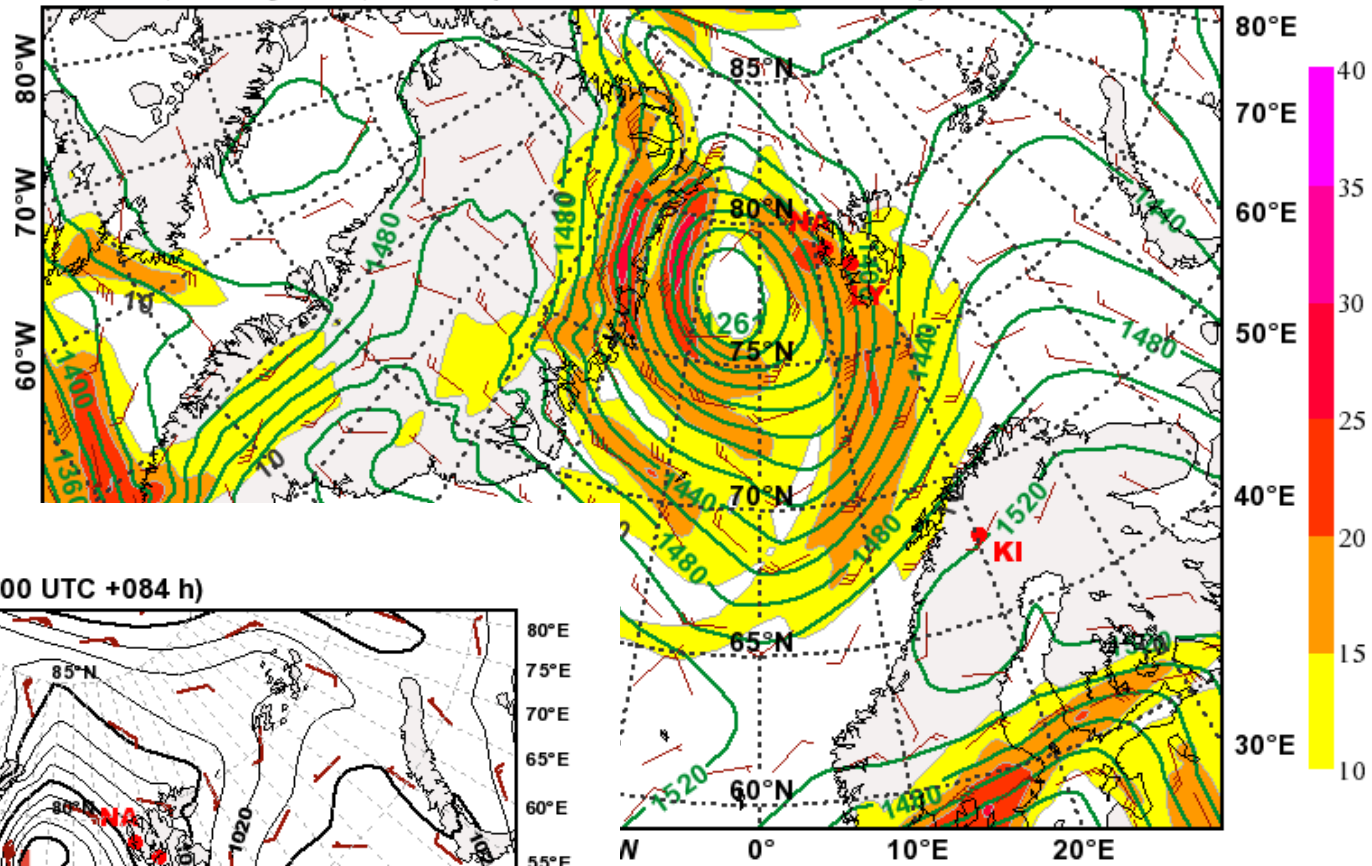


**Conditions should be  
good for a flight before  
the front arrives.**

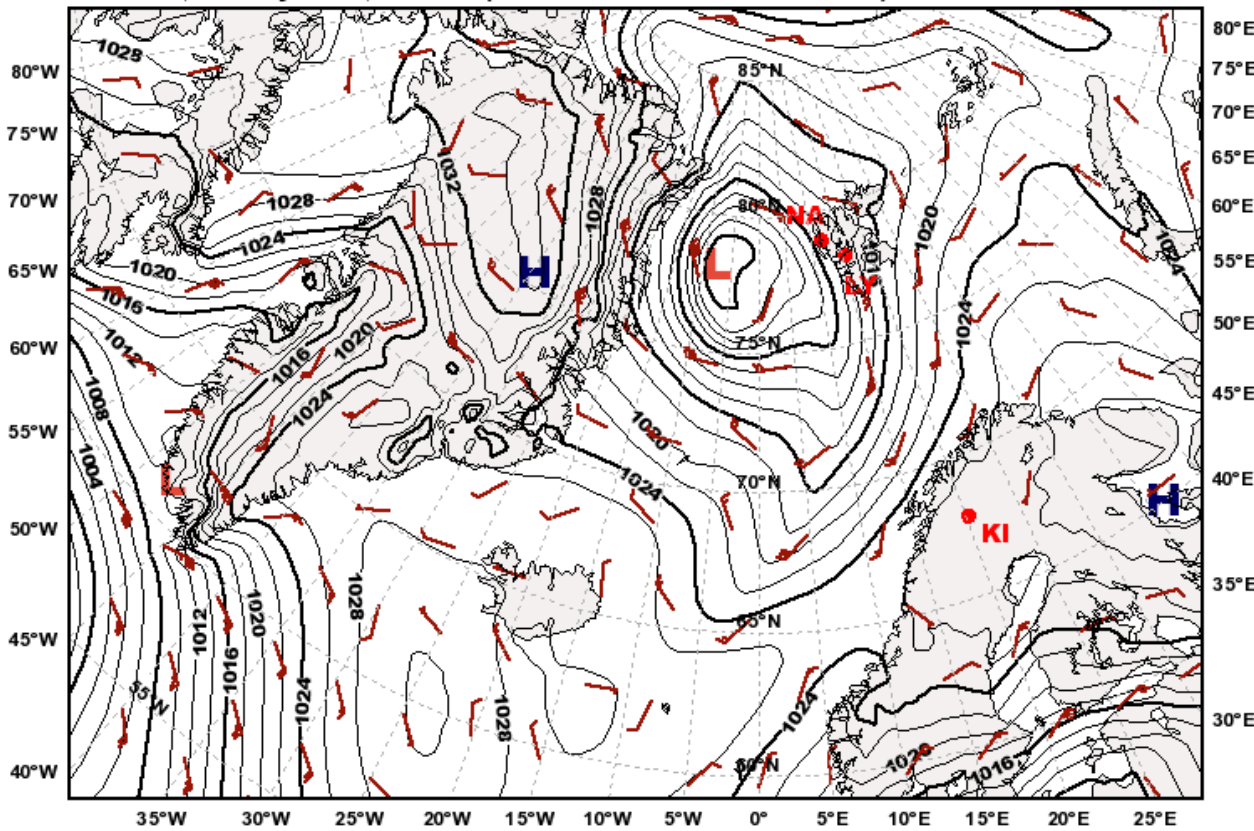


Geopotential Height (m) & Horizontal Wind (m/s) at 850hPa  
 valid: Fri, 07 May 2010, 12 UTC (init: 20100504 00 UTC +084 h)

Friday: "Bad" weather.

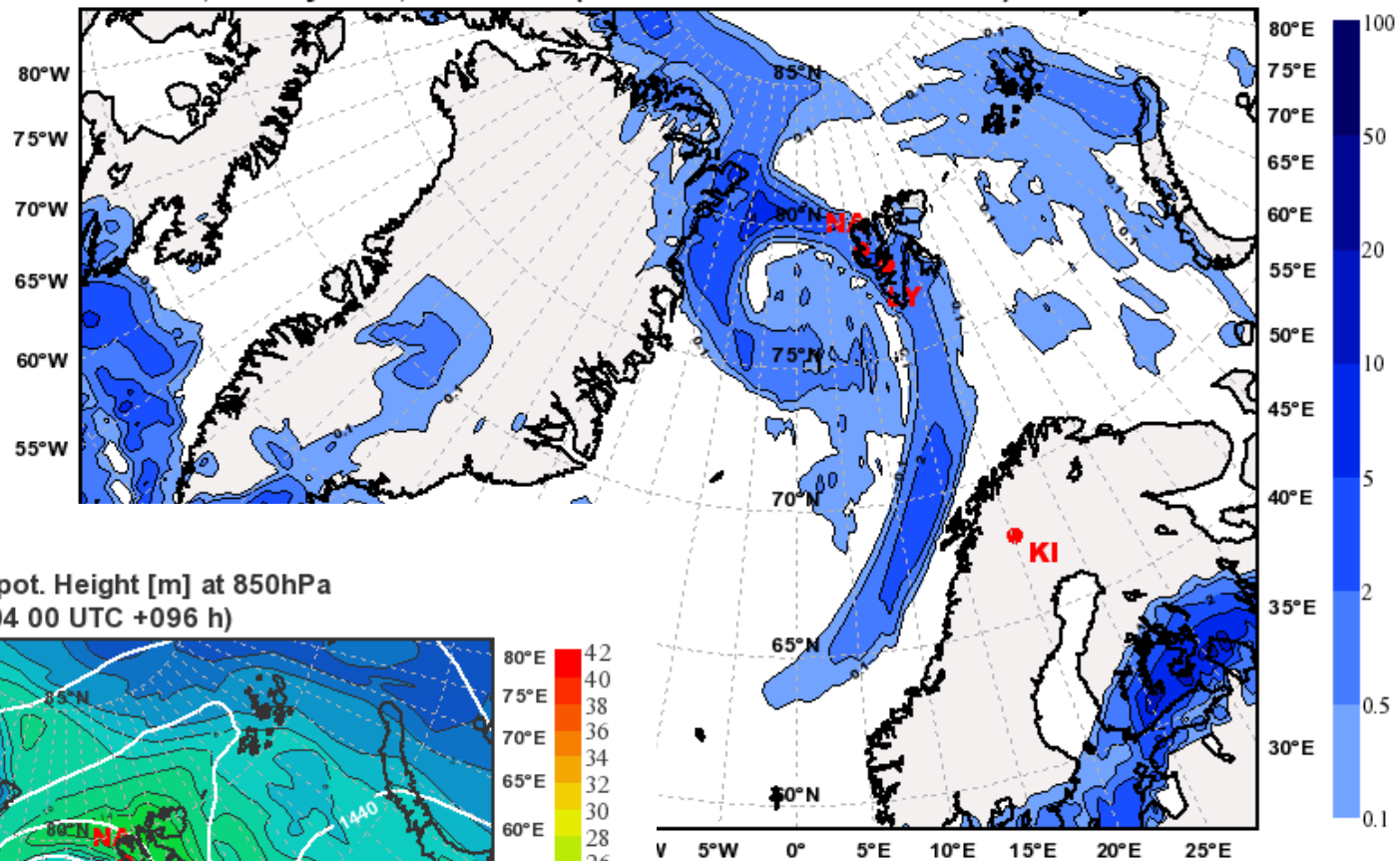


Mean Sea Level Pressure  
 valid: Fri, 07 May 2010, 12 UTC (init: 20100504 00 UTC +084 h)

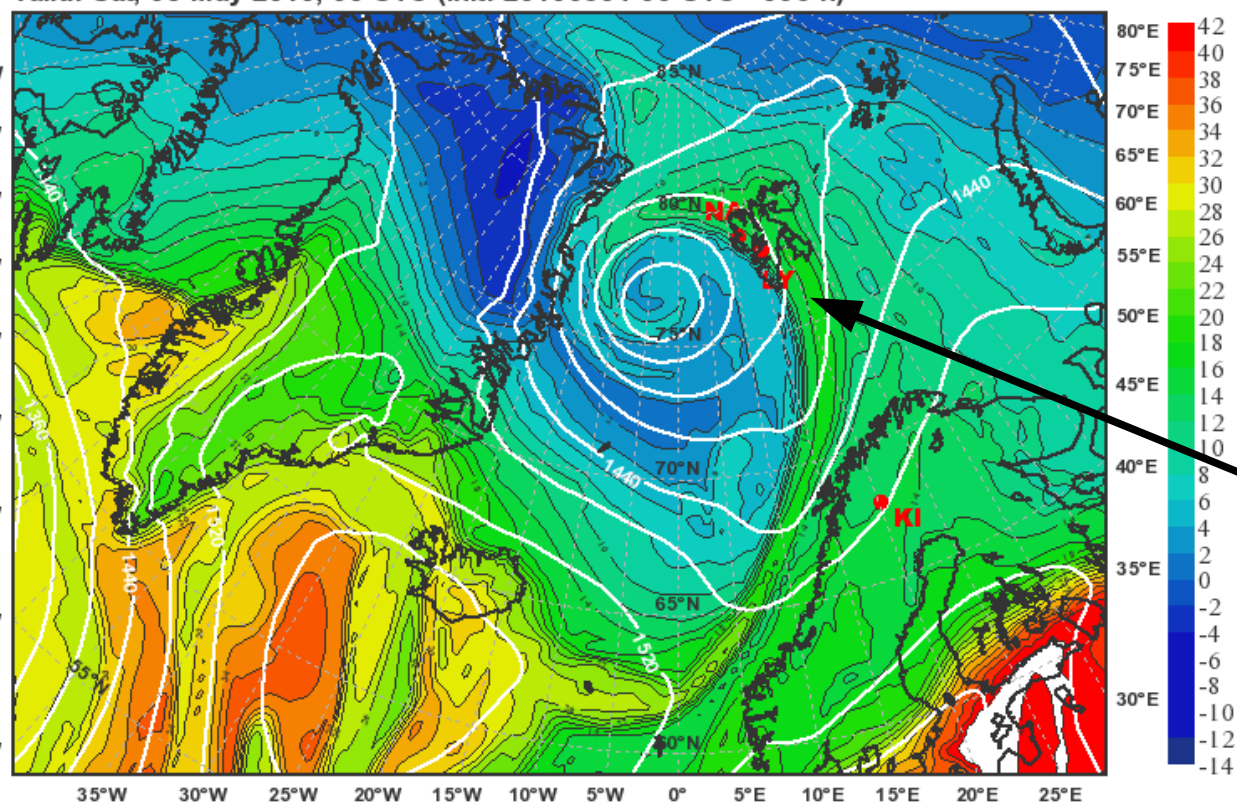




**Total Precipitation [mm]**  
 valid: Fri, 07 May 2010, 18-00 UTC (init: 20100504 00 UTC +096 h)

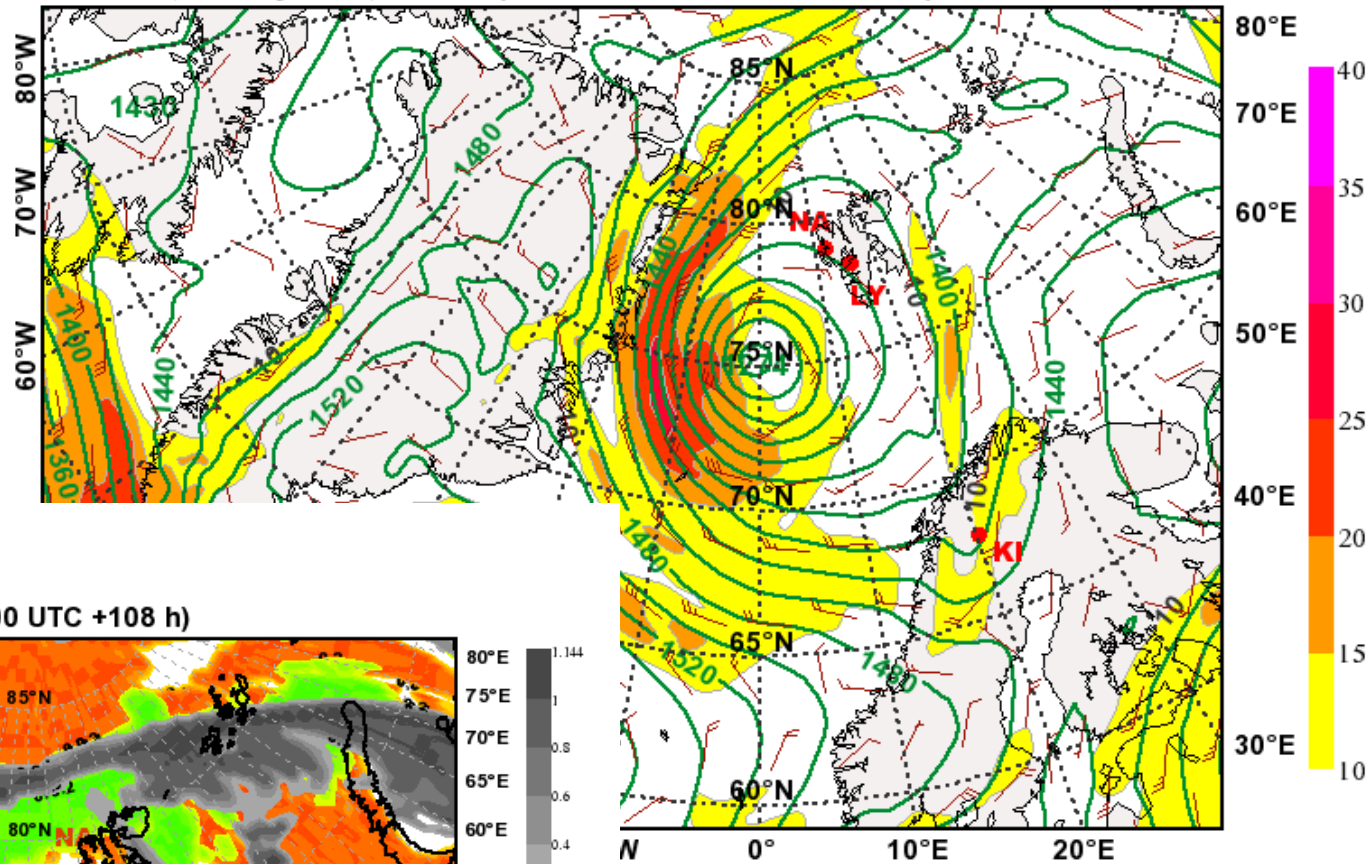


**Equivalent Potential Temperature [°C] & Geopot. Height [m] at 850hPa**  
 valid: Sat, 08 May 2010, 00 UTC (init: 20100504 00 UTC +096 h)

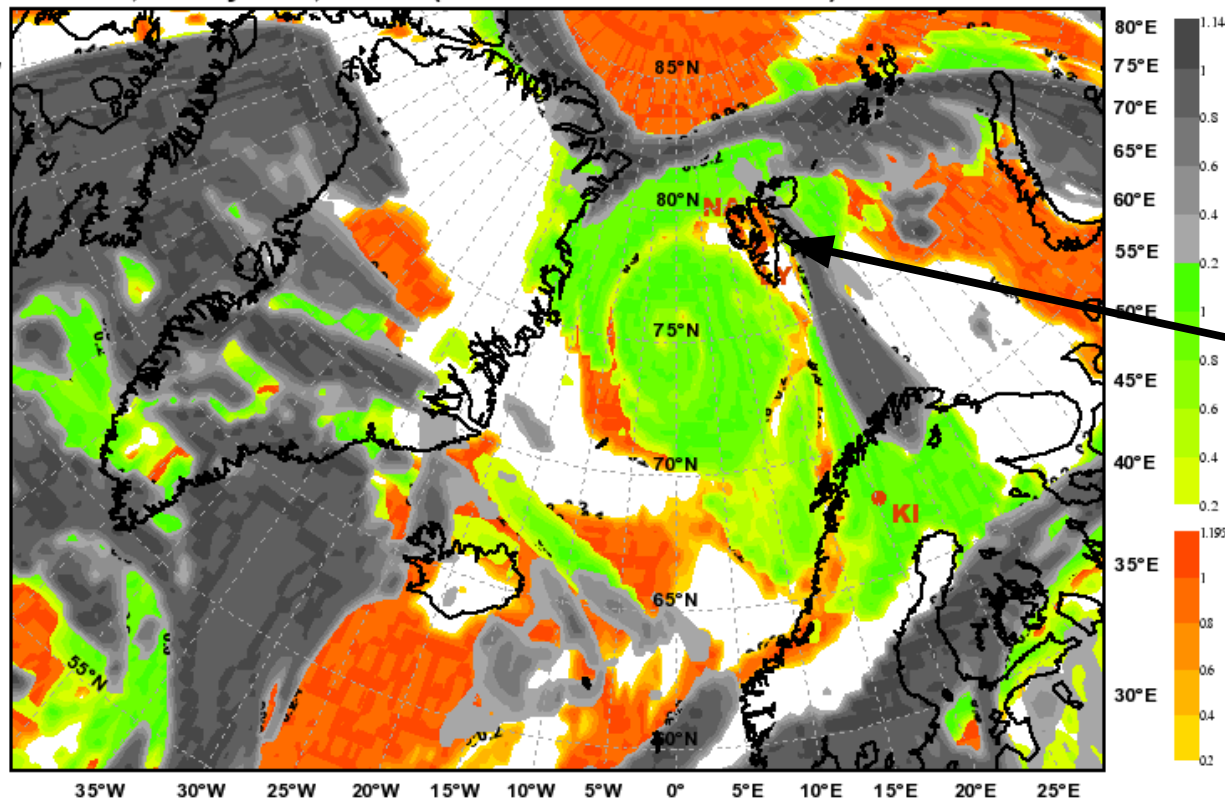


**Cold front of system  
 forecasted to hit  
 Svalbard Friday night.**

**Geopotential Height (m) & Horizontal Wind (m/s) at 850hPa**  
 valid: Sat, 08 May 2010, 12 UTC (init: 20100504 00 UTC +108 h)



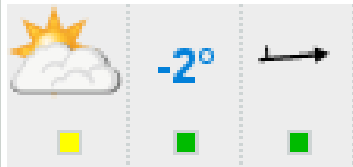
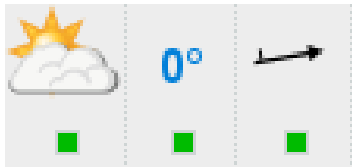
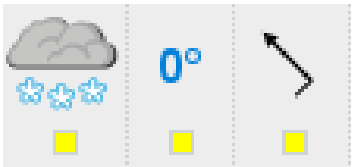

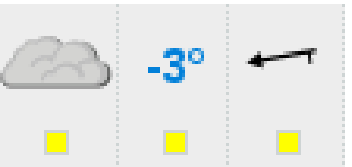
**Total Cloud Cover**  
 valid: Sat, 08 May 2010, 12 UTC (init: 20100504 00 UTC +108 h)



**Saturday: still under cyclonic influence.**

**“Mix of sun and clouds with a chance of showers”??**

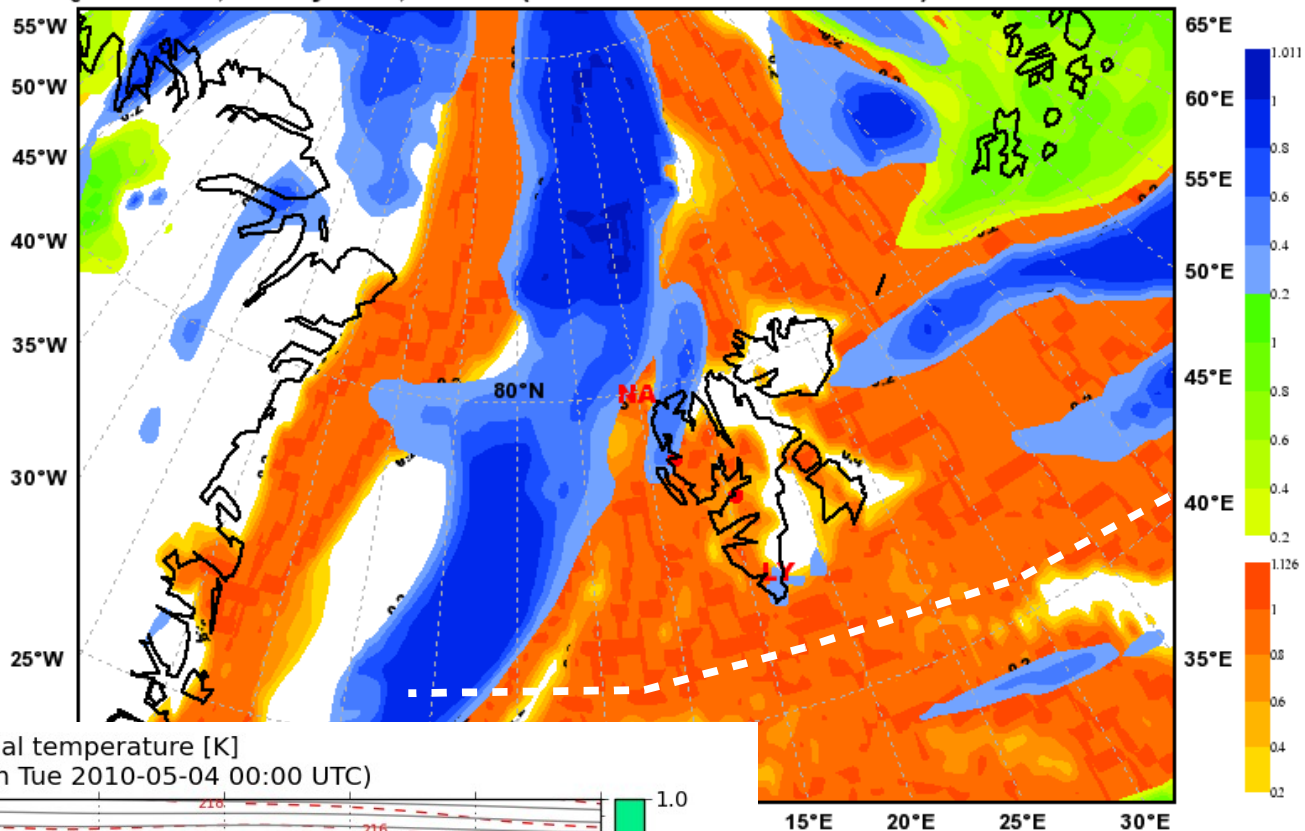
**yr.no forecast for Longyearbyen,  
from Tuesday noon.**

Tomorrow 05/05/2010	Thursday 06/05/2010	Friday 07/05/2010	Saturday 08/05/2010	Sunday 09/05/2010
				
Partly cloudy. Light breeze, 2 m/s from west. 0 mm precipitation per 24 hours.	Partly cloudy. Light breeze, 3 m/s from west-southwest. 0.2 mm precipitation per 24 hours.	Snow. Gentle breeze, 5 m/s from southeast. 3.1 mm precipitation per 24 hours.	Snow. Gentle breeze, 4 m/s from east. 2.2 mm precipitation per 24 hours.	Cloudy. Gentle breeze, 4 m/s from east. 0 mm precipitation per 24 hours.



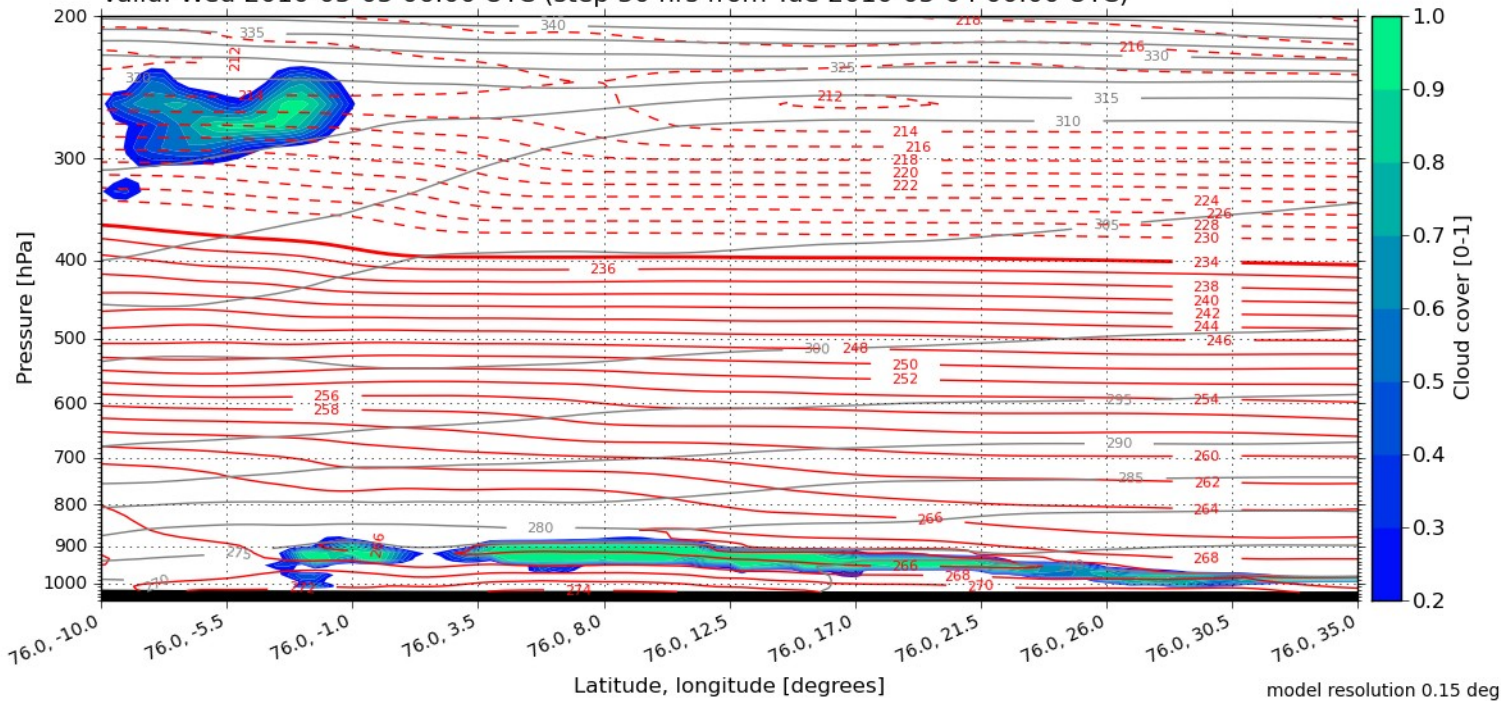
## Wednesday vertical sections.

**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 06 UTC (init: 20100504 00 UTC +030 h)



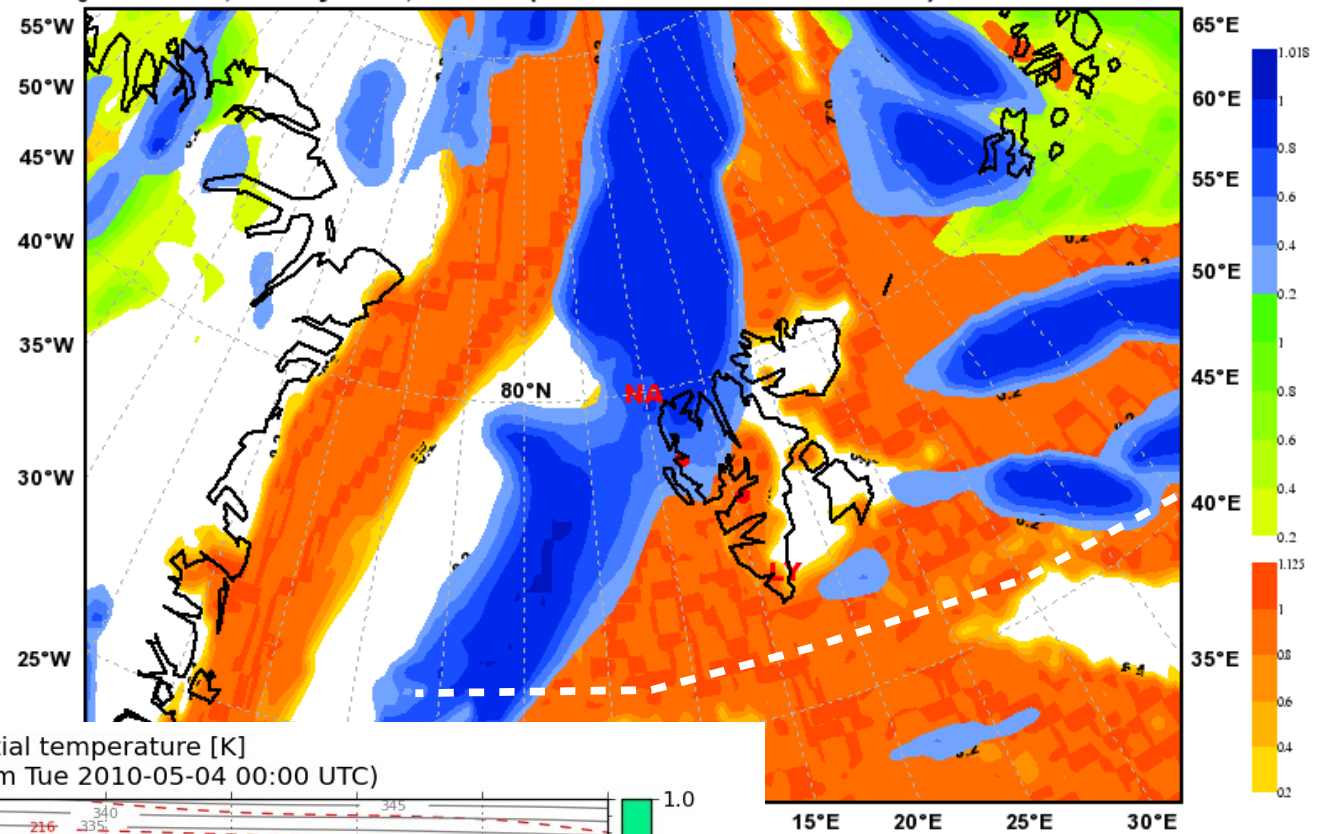
## E-W along 76N

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 06:00 UTC (step 30 hrs from Tue 2010-05-04 00:00 UTC)



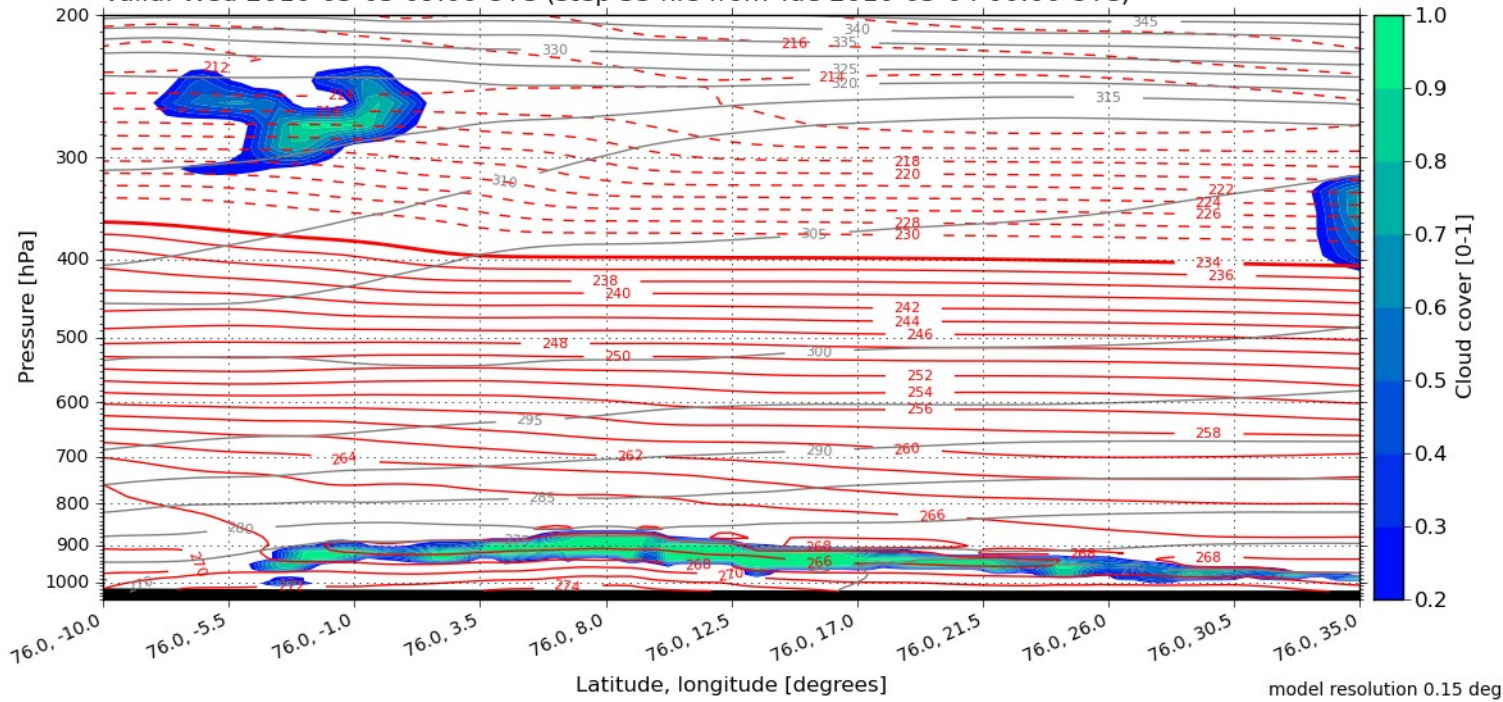
model resolution 0.15 deg

Total Cloud Cover  
Valid: Wed, 05 May 2010, 09 UTC (init: 20100504 00 UTC +033 h)



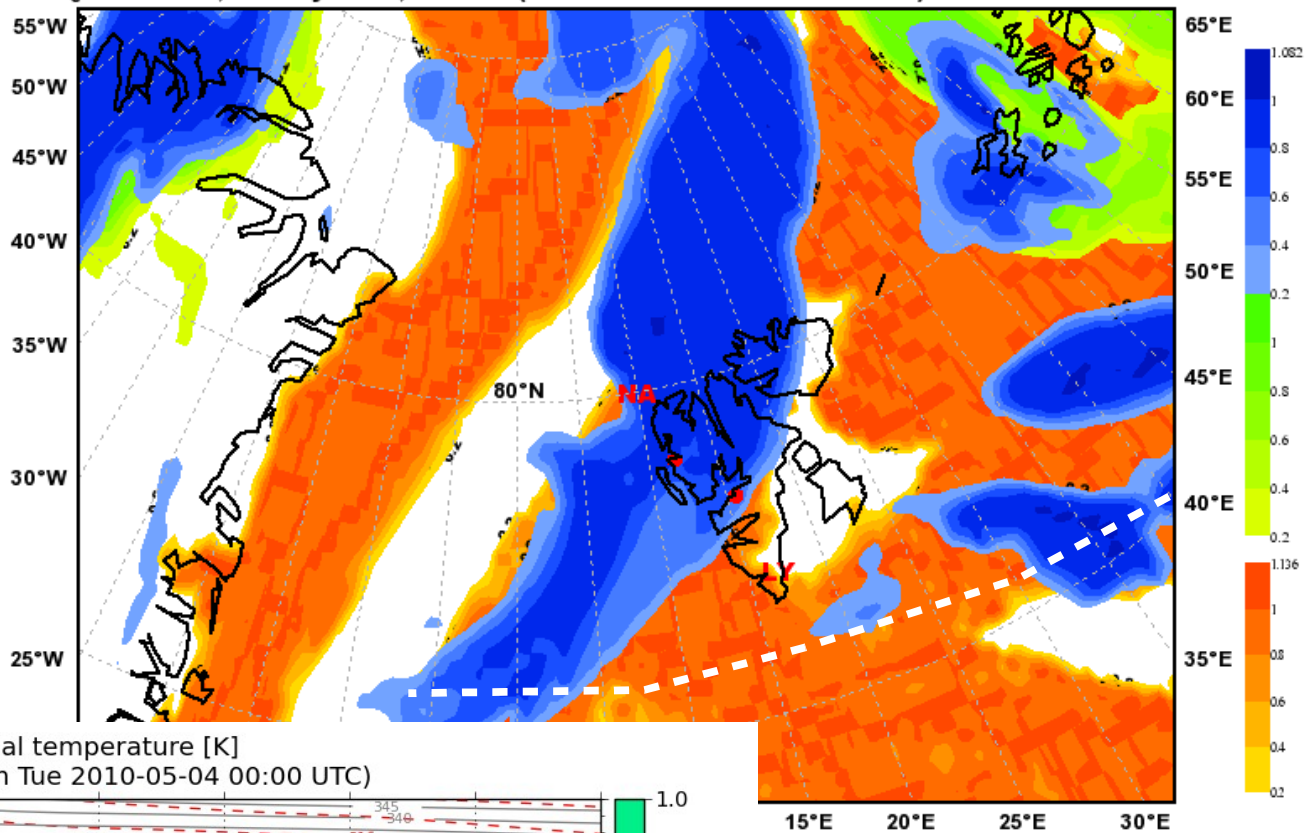
## E-W along 76N

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
Valid: Wed 2010-05-05 09:00 UTC (step 33 hrs from Tue 2010-05-04 00:00 UTC)



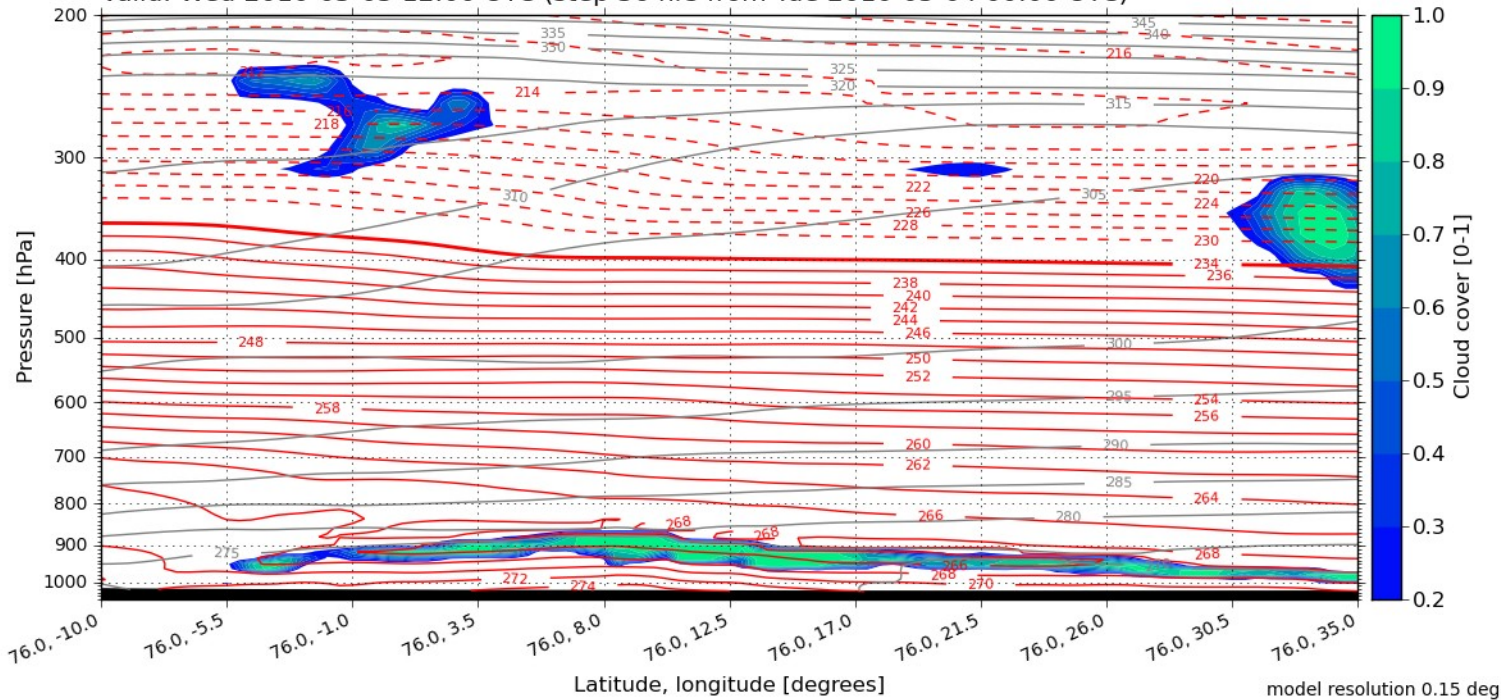


**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 12 UTC (init: 20100504 00 UTC +036 h)

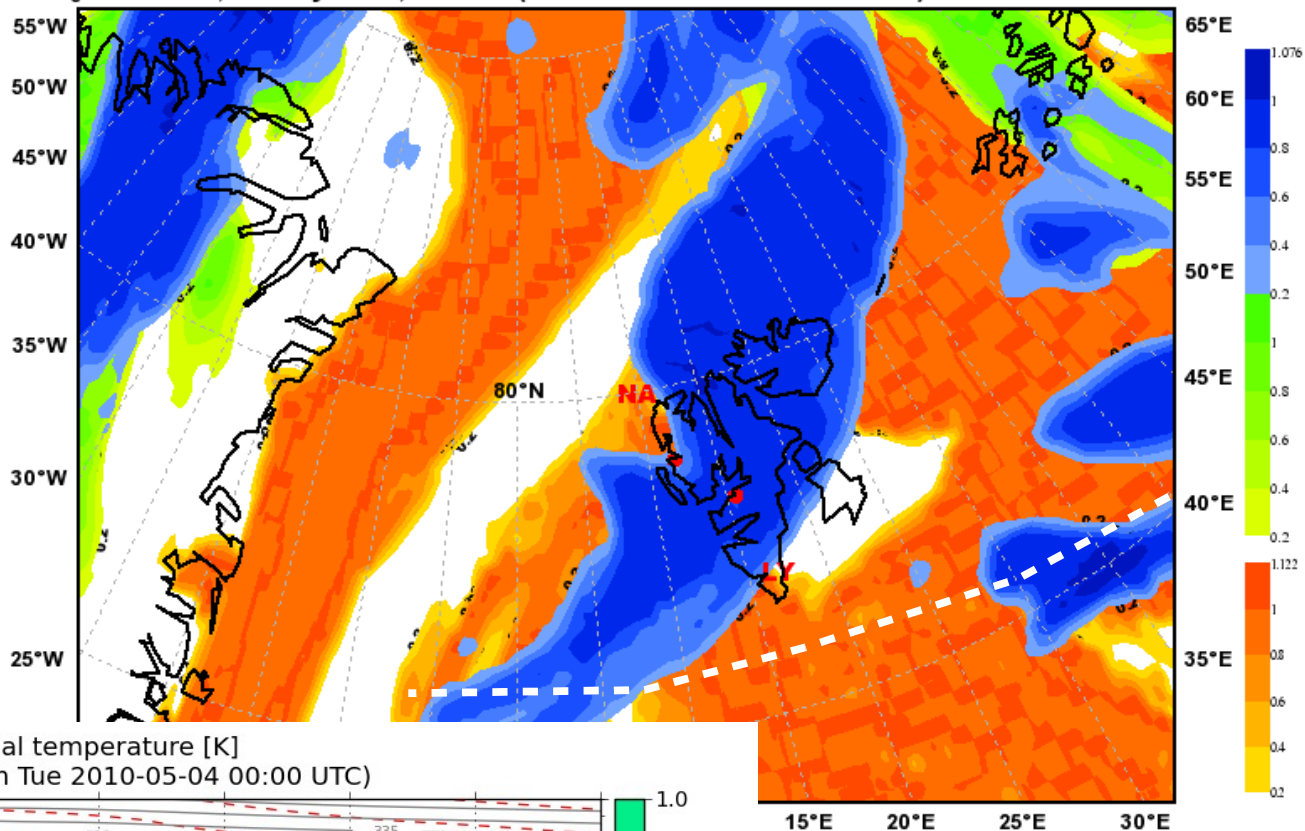


## E-W along 76N

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 12:00 UTC (step 36 hrs from Tue 2010-05-04 00:00 UTC)

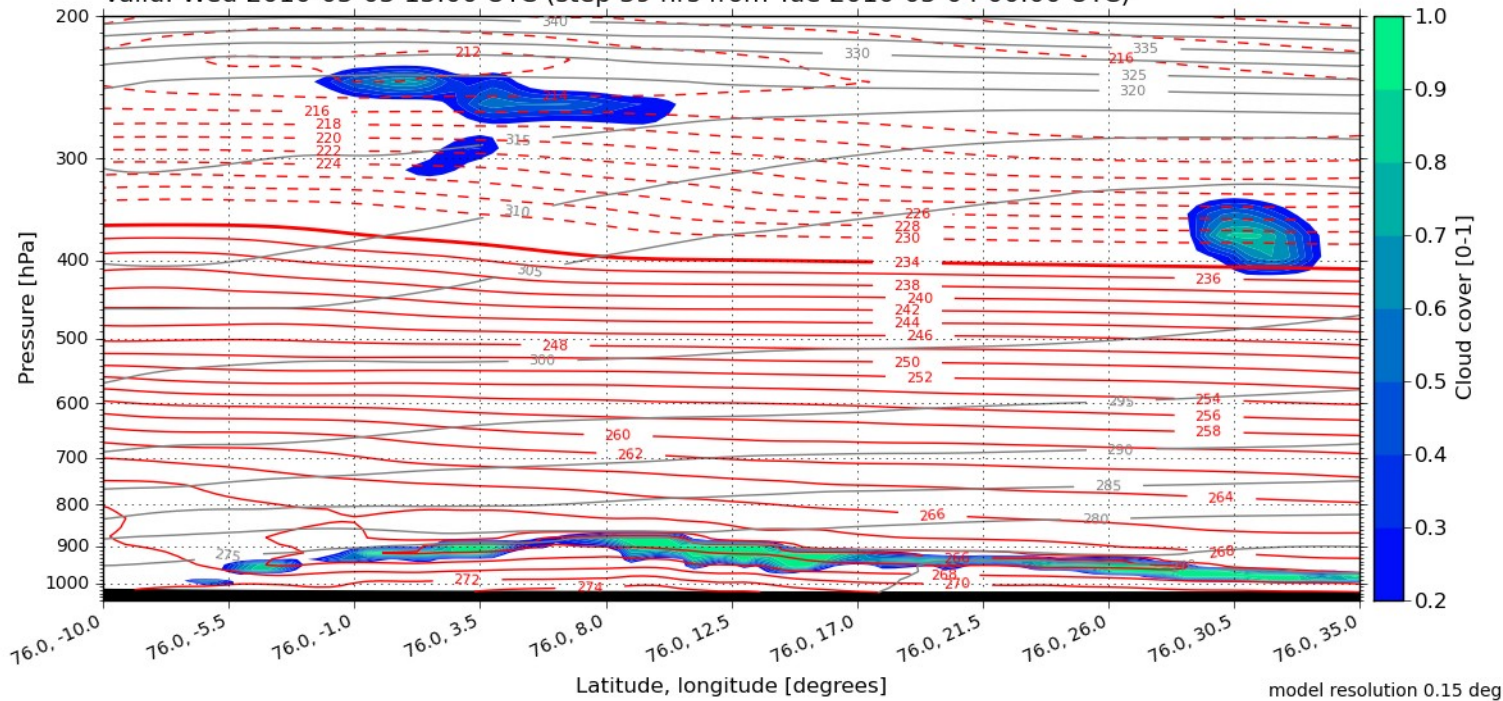


**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 15 UTC (init: 20100504 00 UTC +039 h)



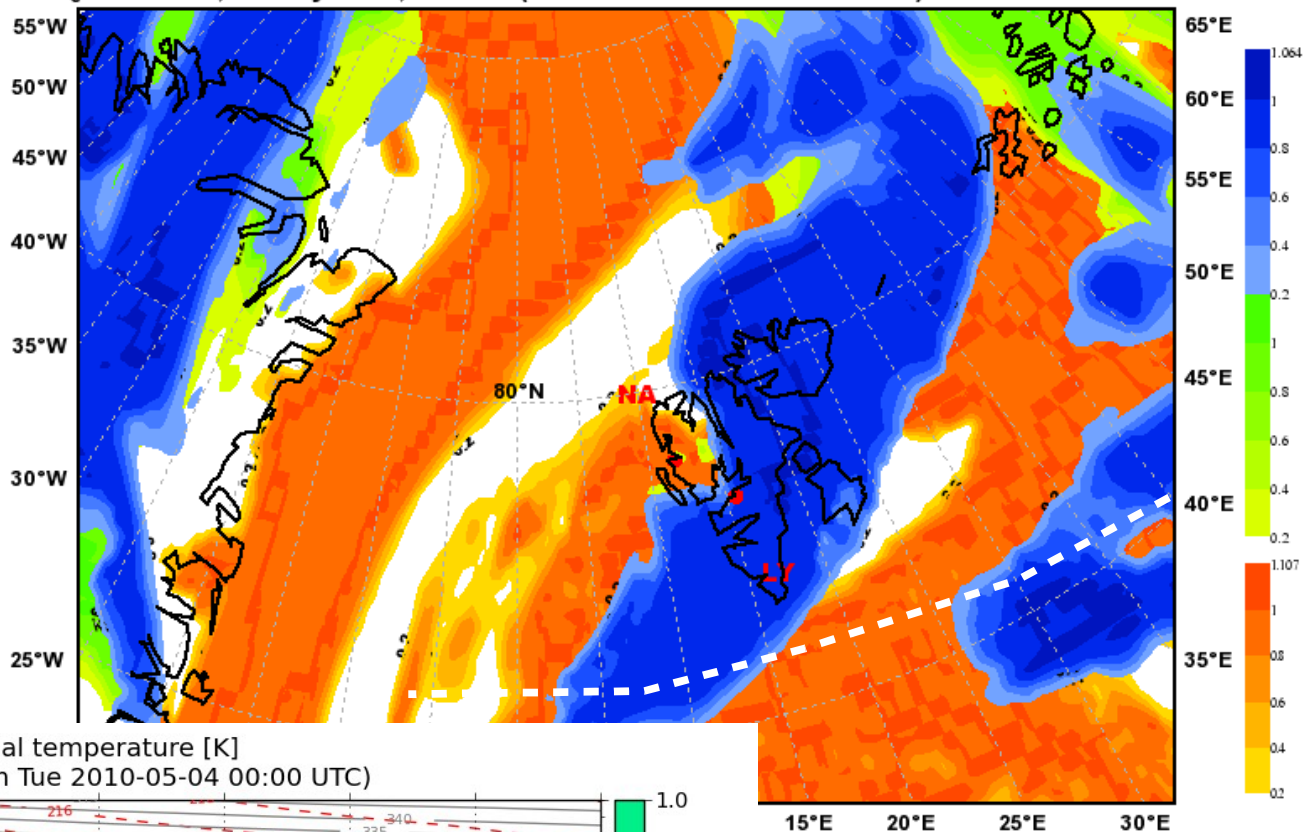
## E-W along 76N

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 15:00 UTC (step 39 hrs from Tue 2010-05-04 00:00 UTC)



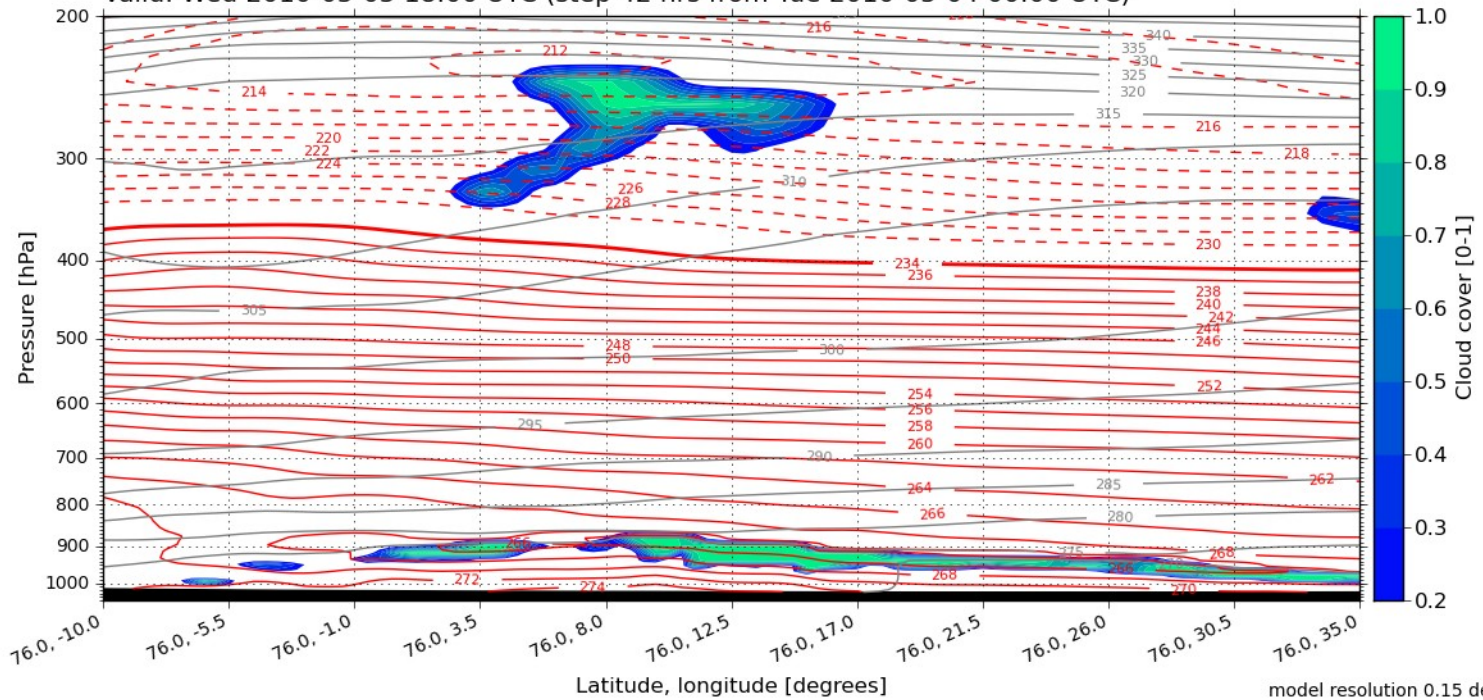


**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 18 UTC (init: 20100504 00 UTC +042 h)



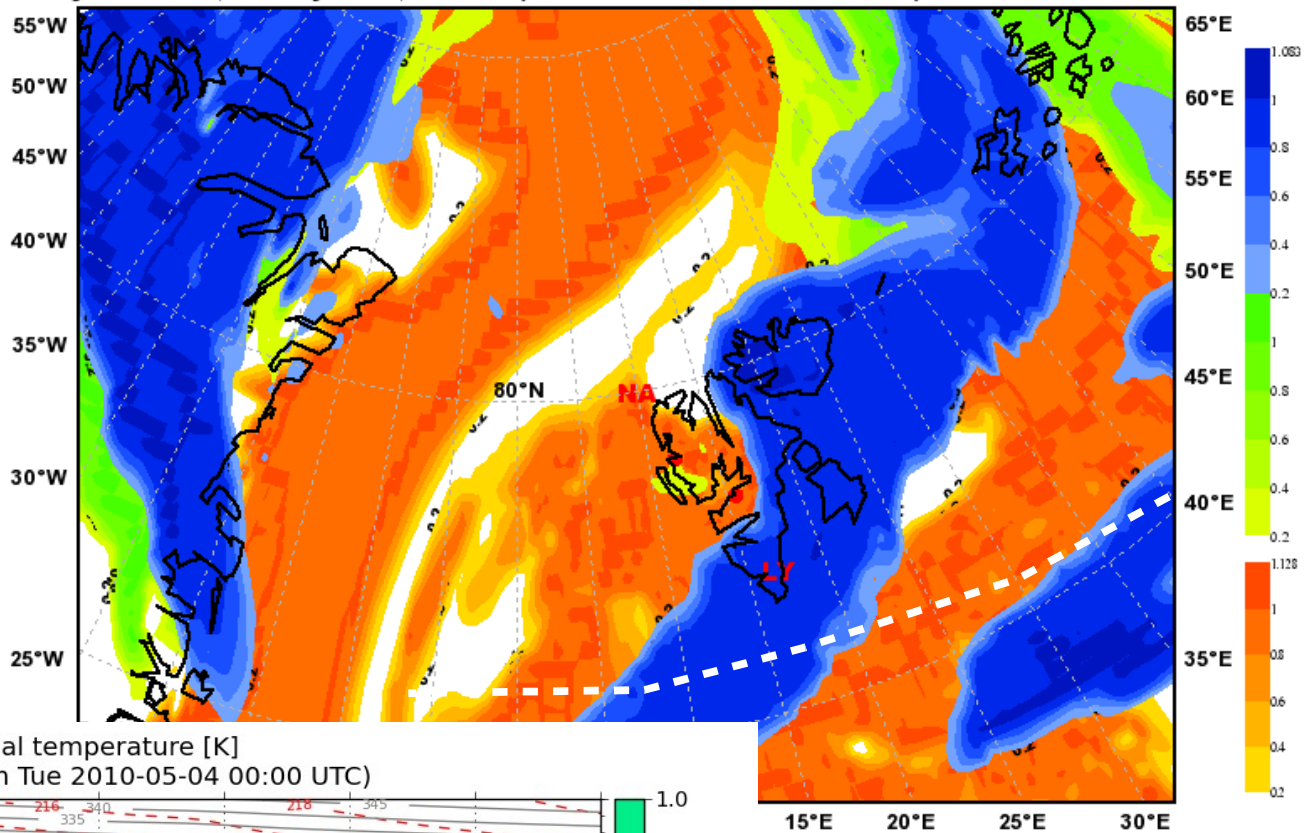
## E-W along 76N

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 18:00 UTC (step 42 hrs from Tue 2010-05-04 00:00 UTC)



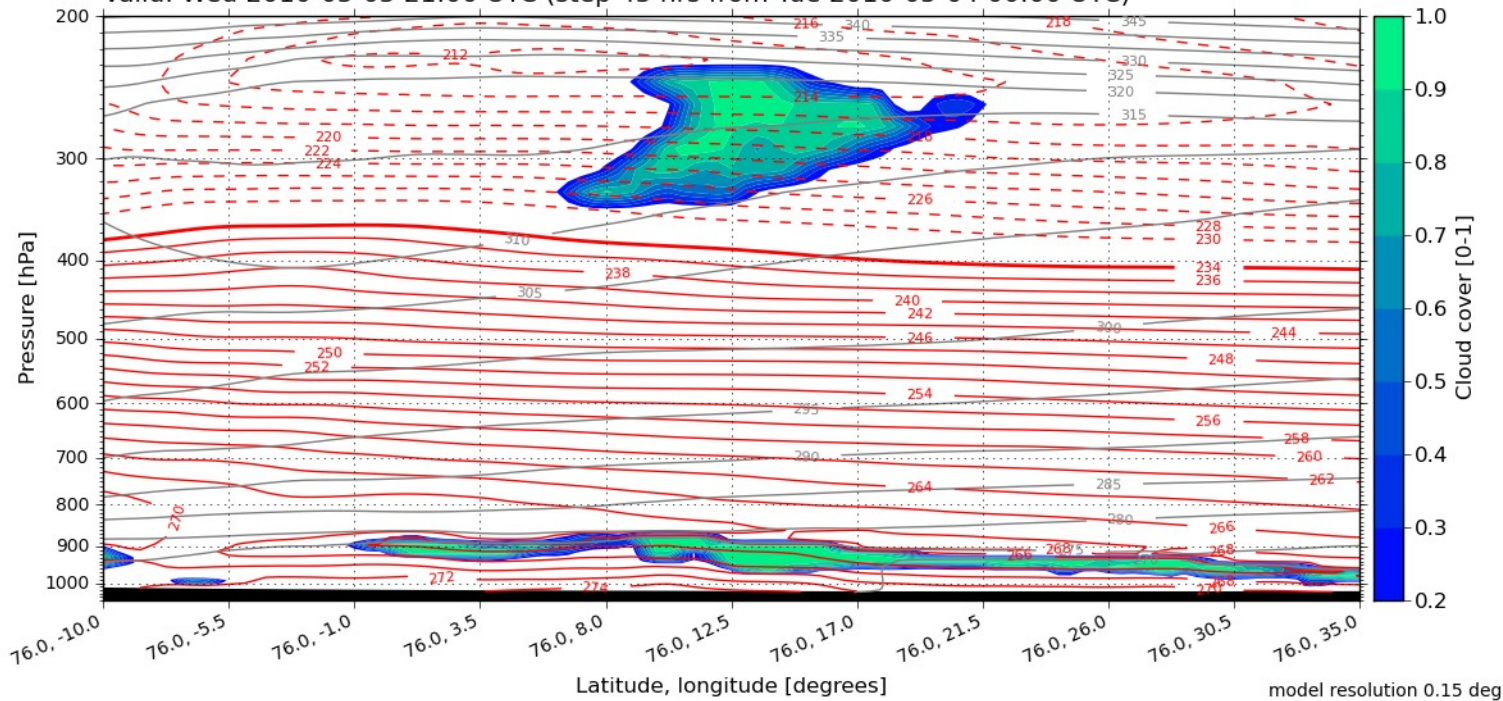


**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 21 UTC (init: 20100504 00 UTC +045 h)



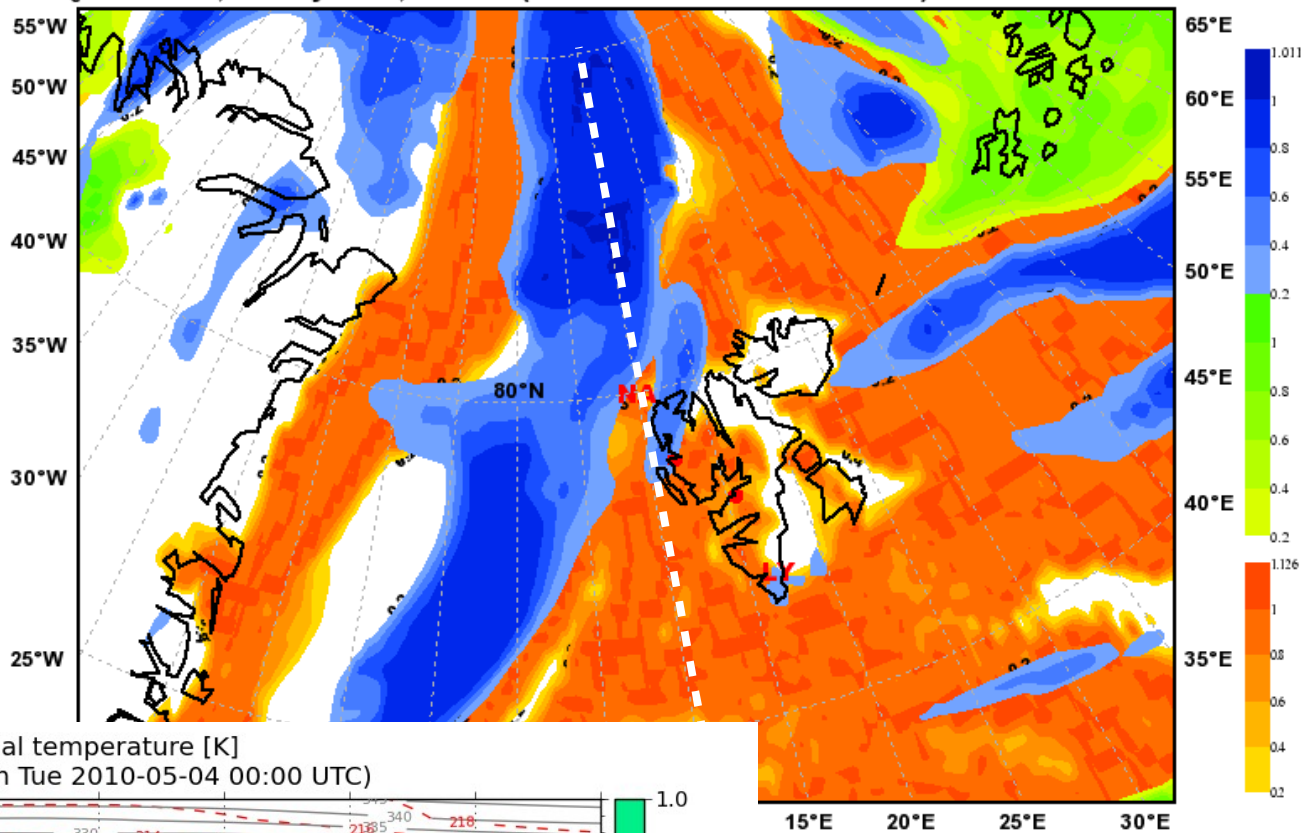
## E-W along 76N

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 21:00 UTC (step 45 hrs from Tue 2010-05-04 00:00 UTC)



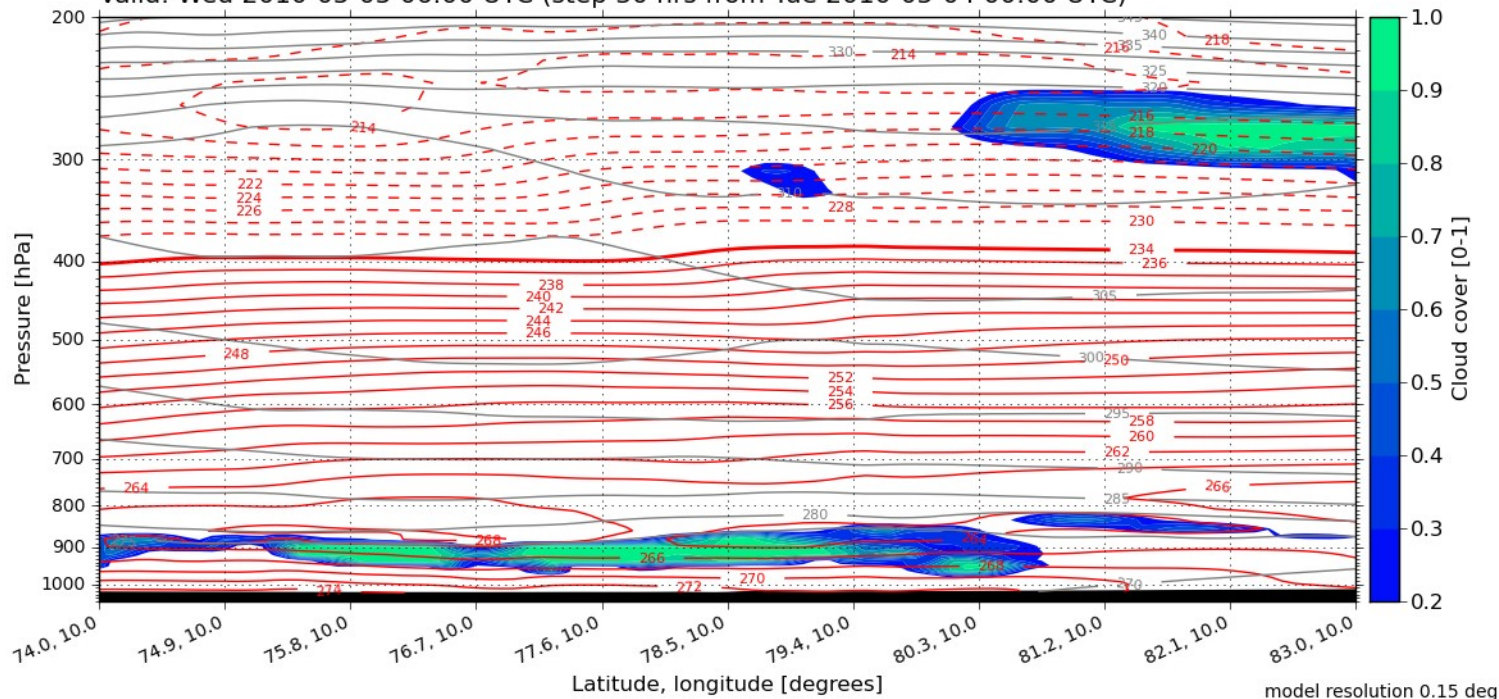
model resolution 0.15 deg

**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 06 UTC (init: 20100504 00 UTC +030 h)



# N-S along 10E

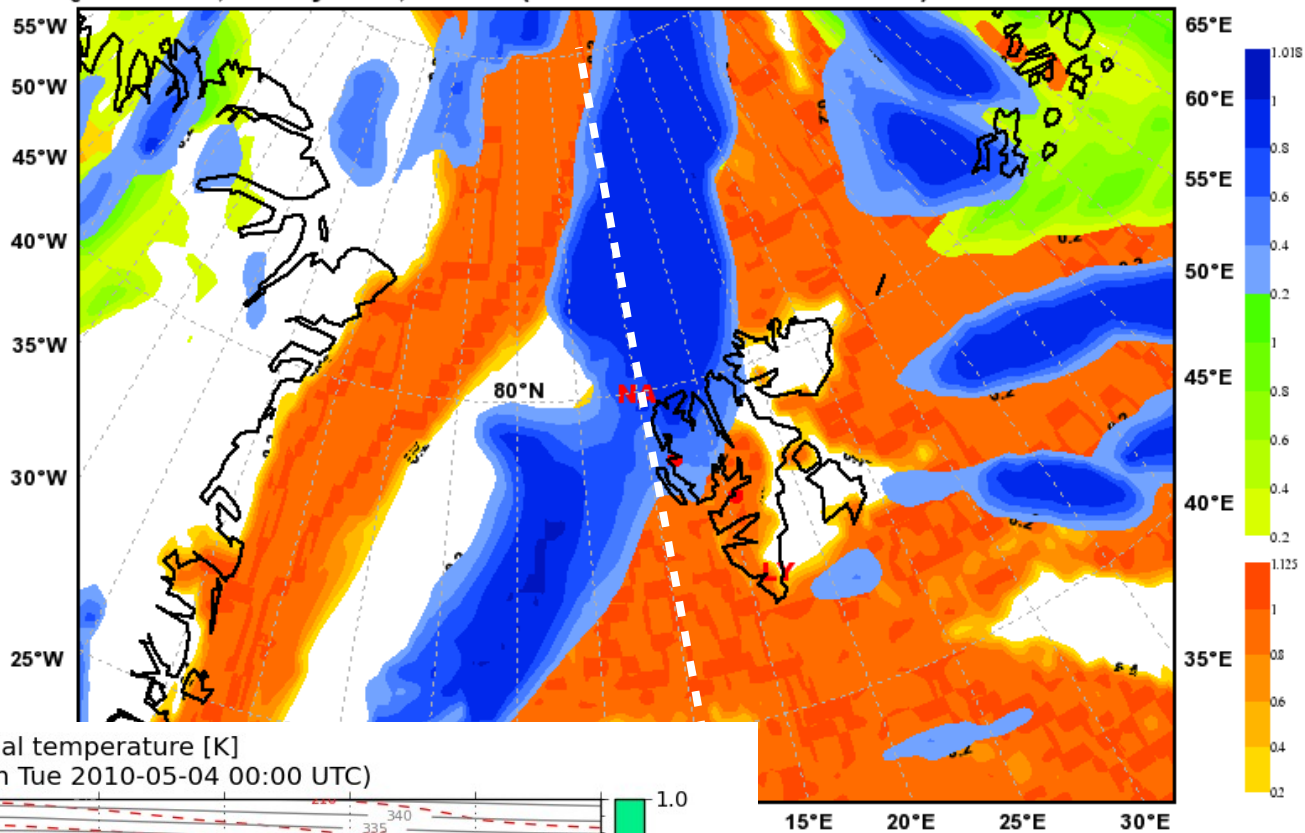
Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 06:00 UTC (step 30 hrs from Tue 2010-05-04 00:00 UTC)



model resolution 0.15 deg

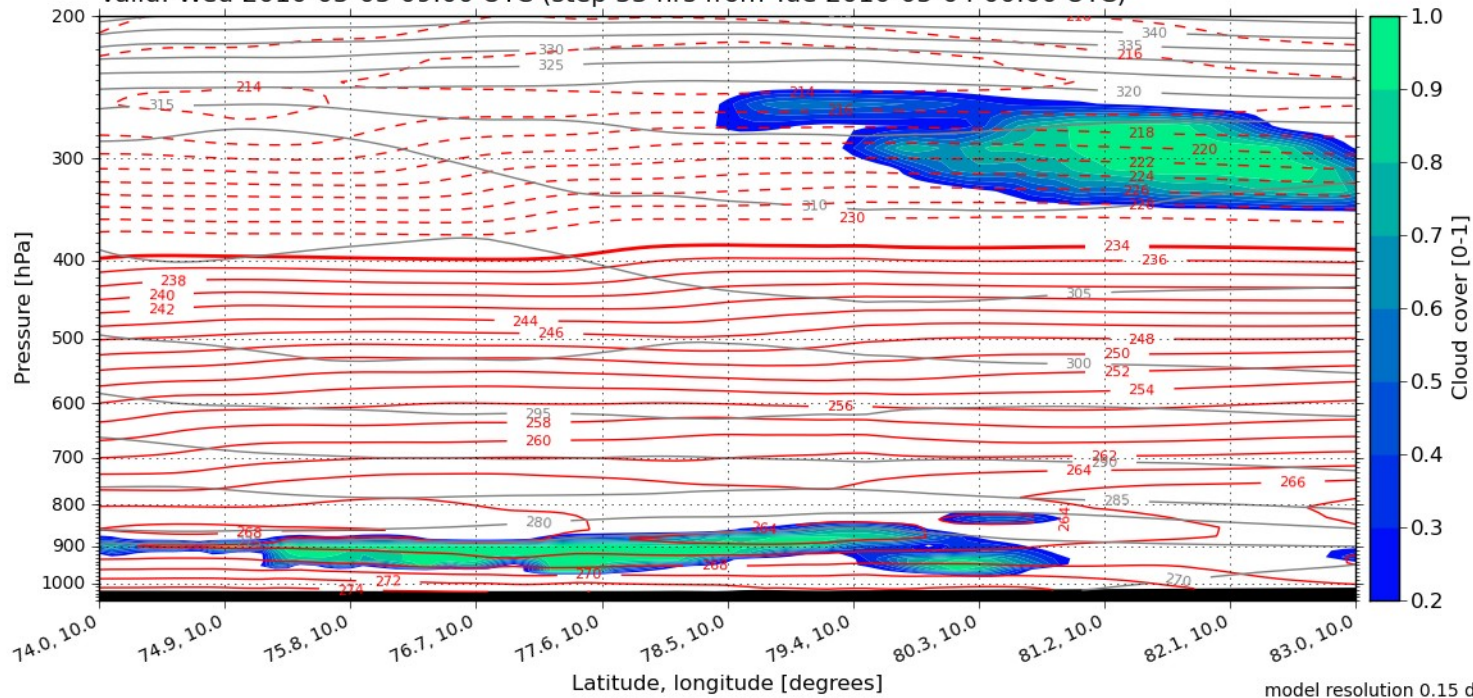


Total Cloud Cover  
Valid: Wed, 05 May 2010, 09 UTC (init: 20100504 00 UTC +033 h)



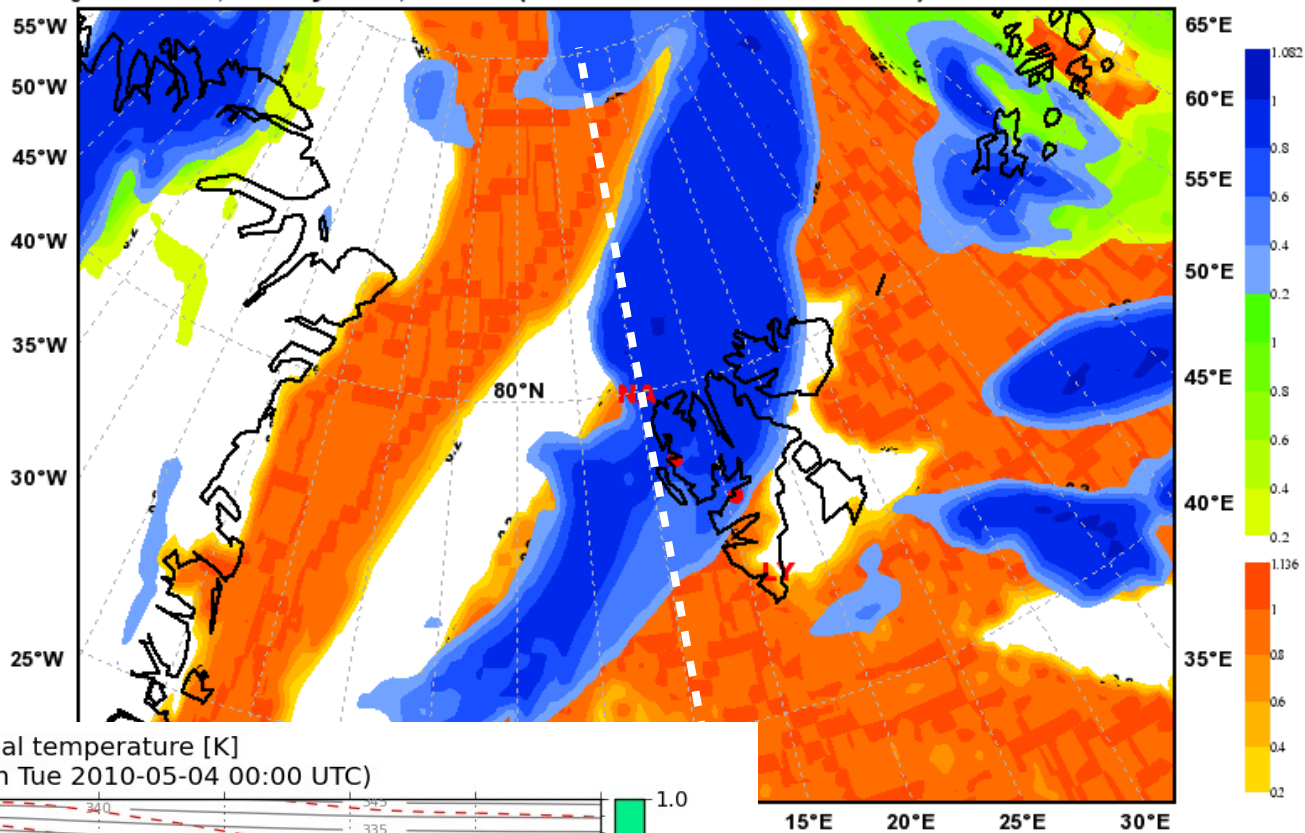
## N-S along 10E

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
Valid: Wed 2010-05-05 09:00 UTC (step 33 hrs from Tue 2010-05-04 00:00 UTC)



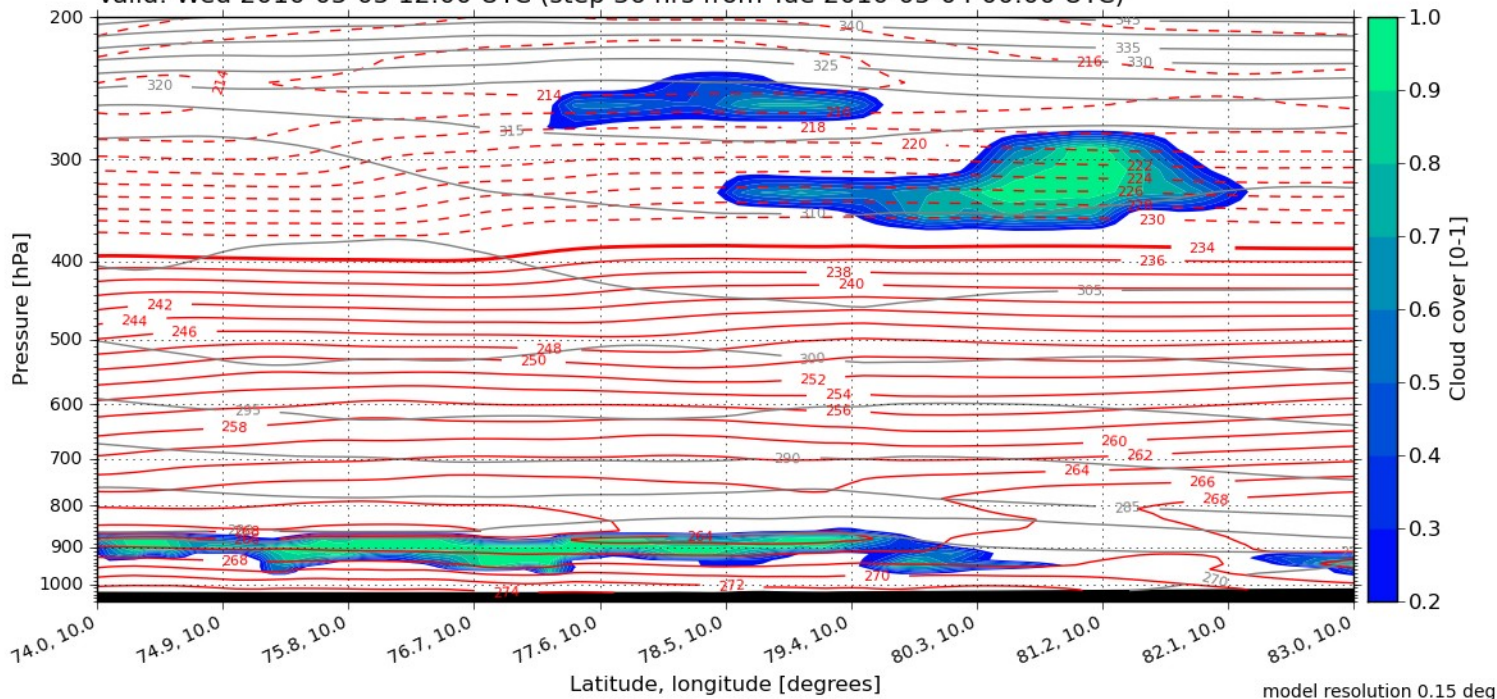


**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 12 UTC (init: 20100504 00 UTC +036 h)



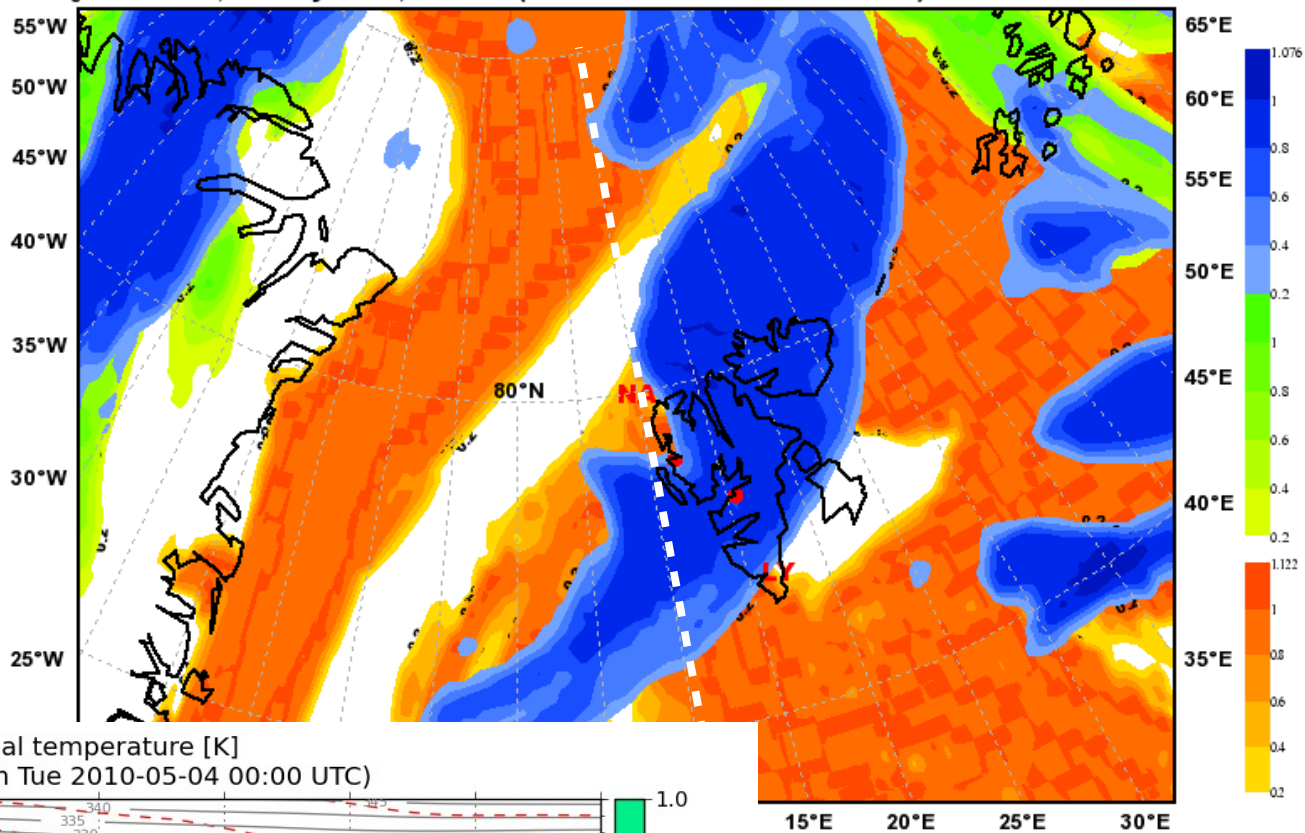
# N-S along 10E

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 12:00 UTC (step 36 hrs from Tue 2010-05-04 00:00 UTC)



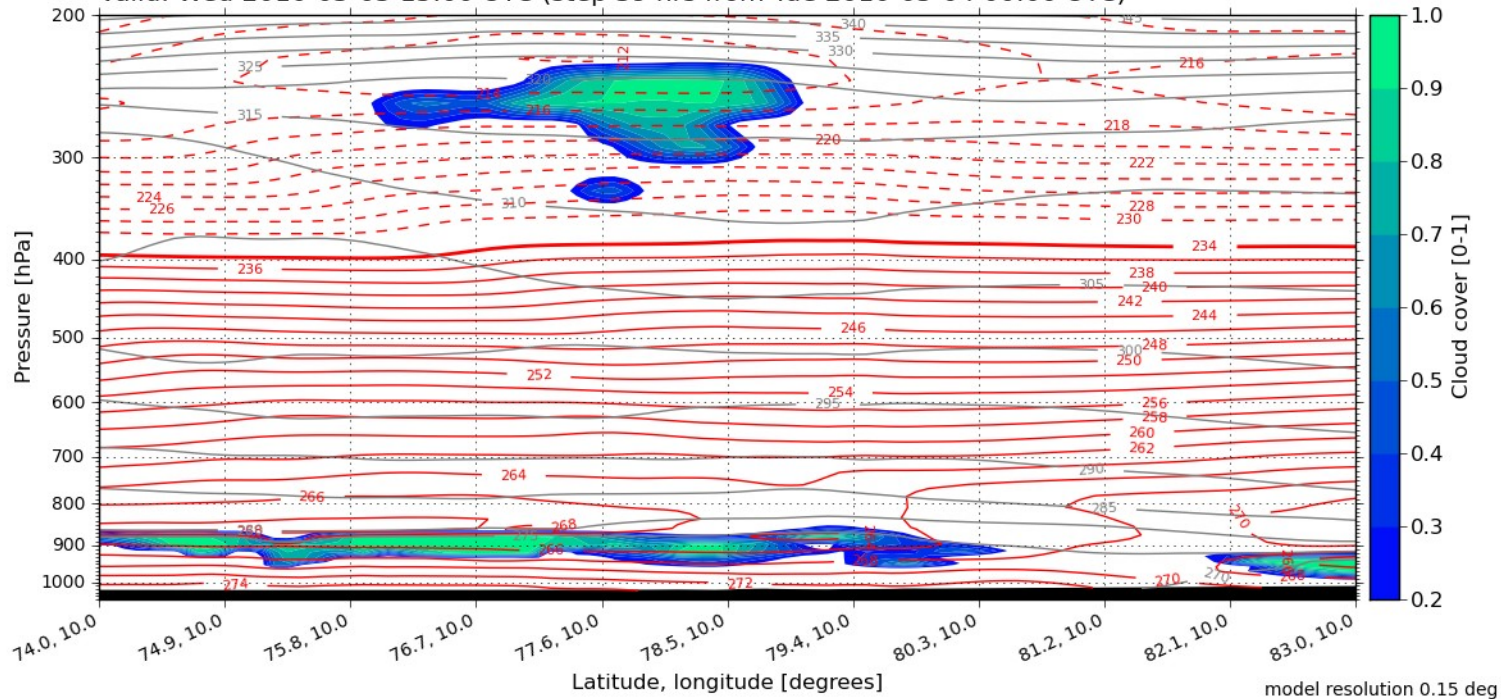
model resolution 0.15 deg

Total Cloud Cover  
Valid: Wed, 05 May 2010, 15 UTC (init: 20100504 00 UTC +039 h)



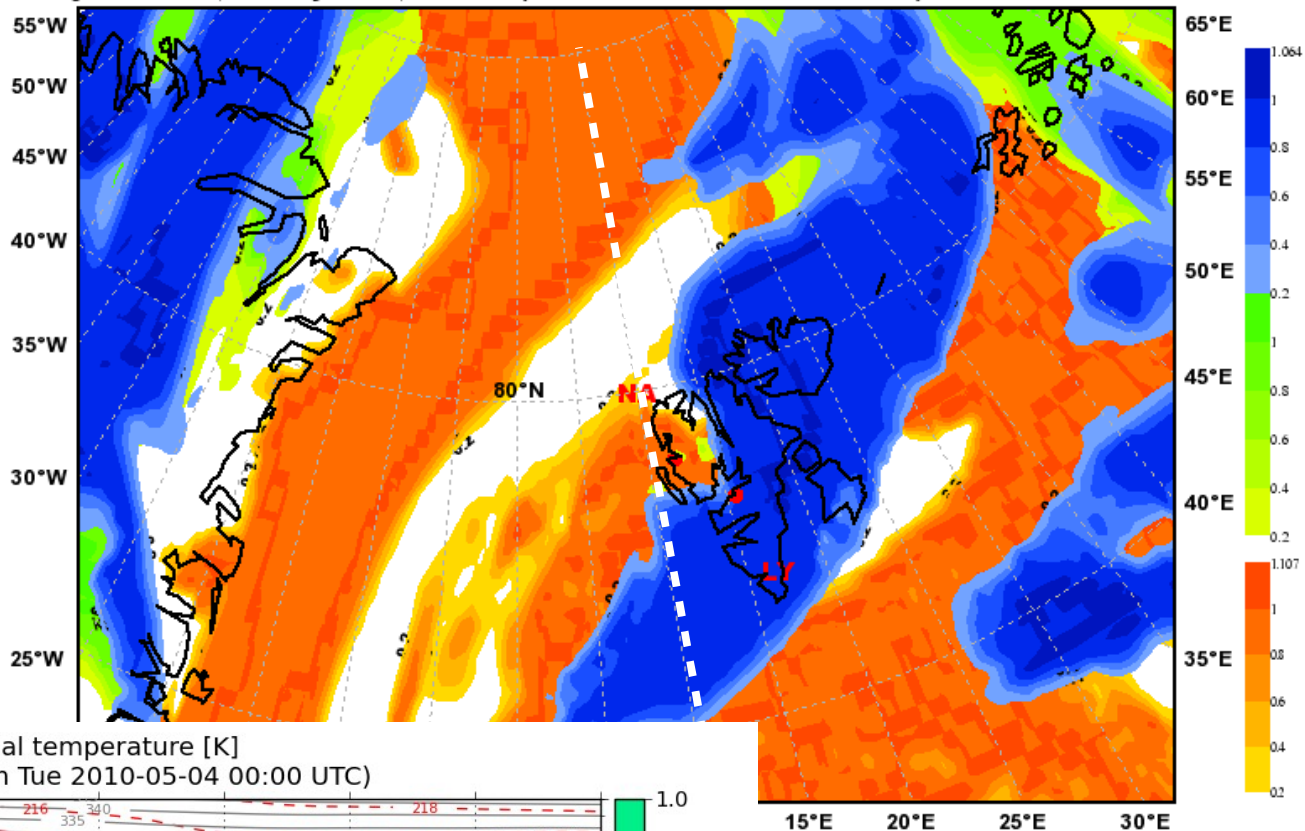
## N-S along 10E

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
Valid: Wed 2010-05-05 15:00 UTC (step 39 hrs from Tue 2010-05-04 00:00 UTC)



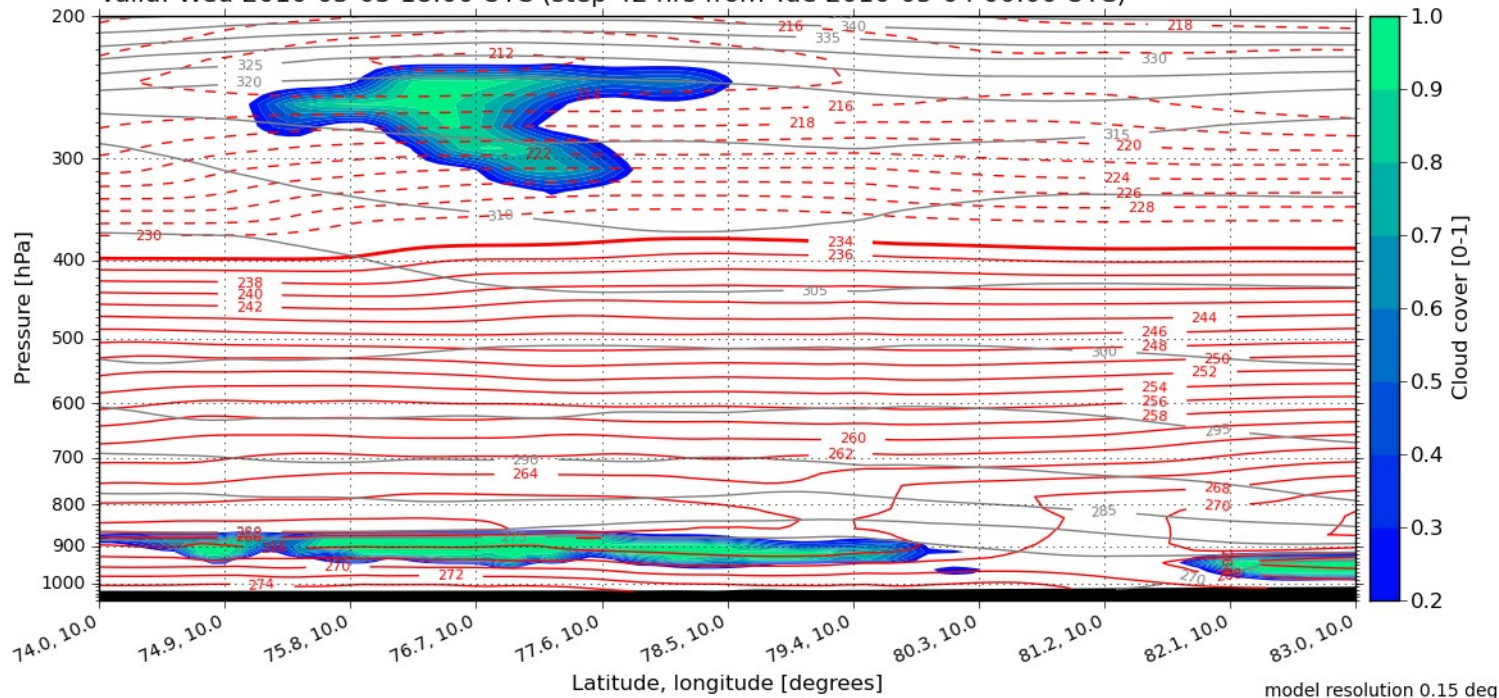


**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 18 UTC (init: 20100504 00 UTC +042 h)



# N-S along 10E

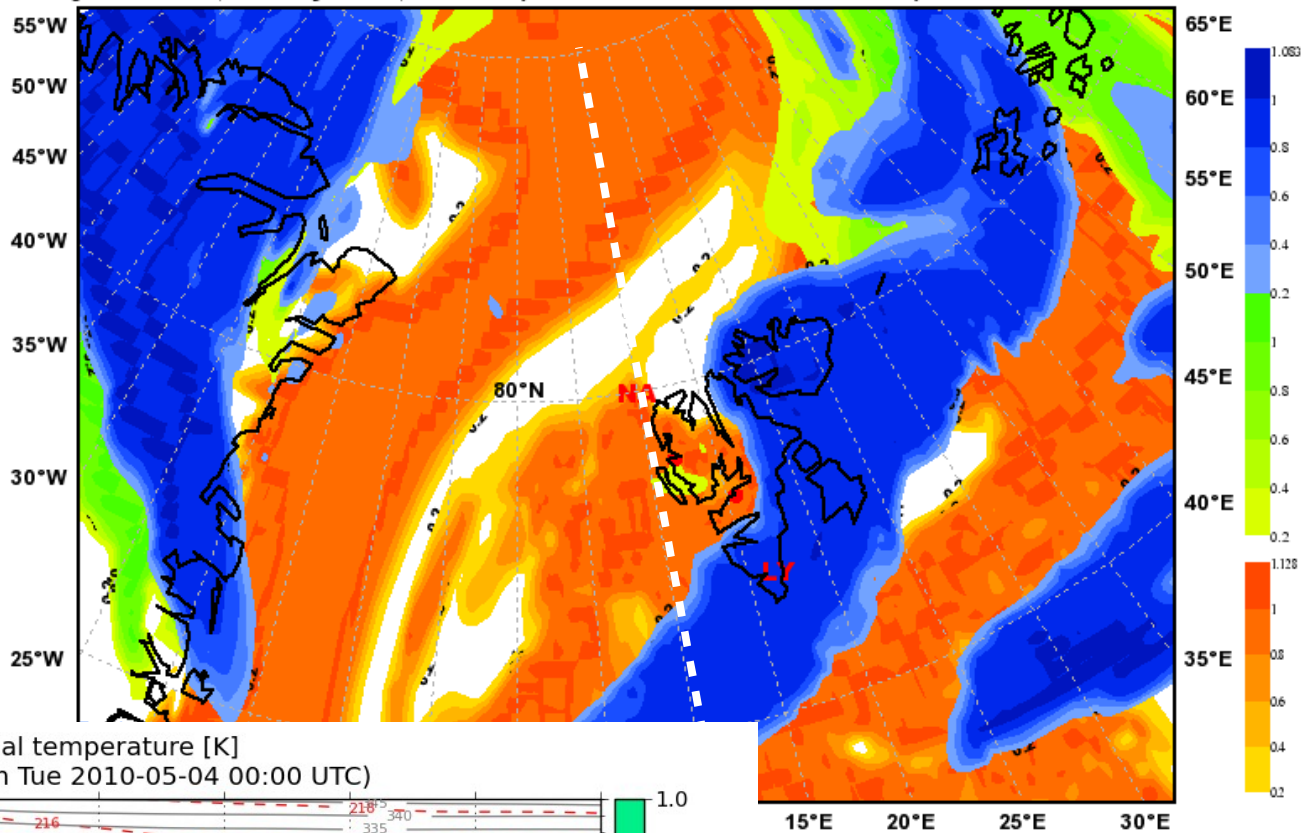
Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 18:00 UTC (step 42 hrs from Tue 2010-05-04 00:00 UTC)



model resolution 0.15 deg

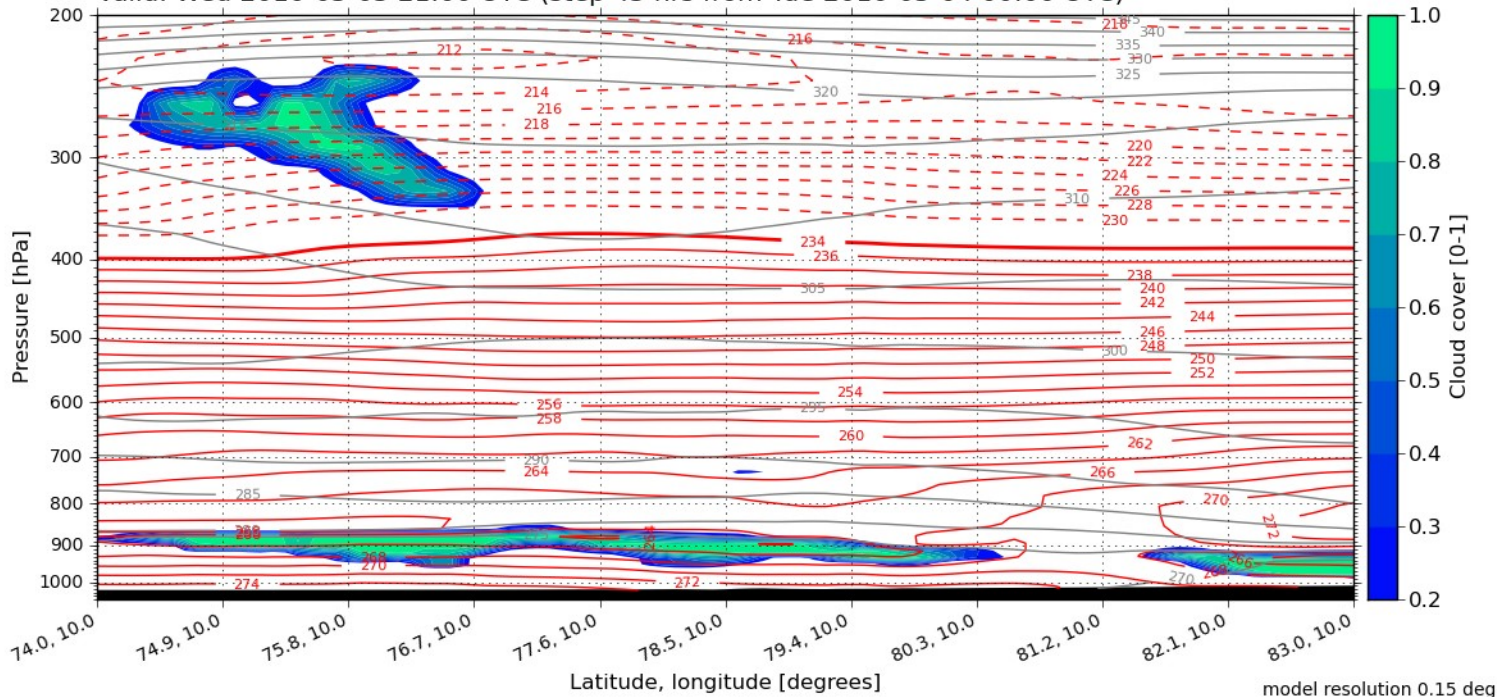


**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 21 UTC (init: 20100504 00 UTC +045 h)



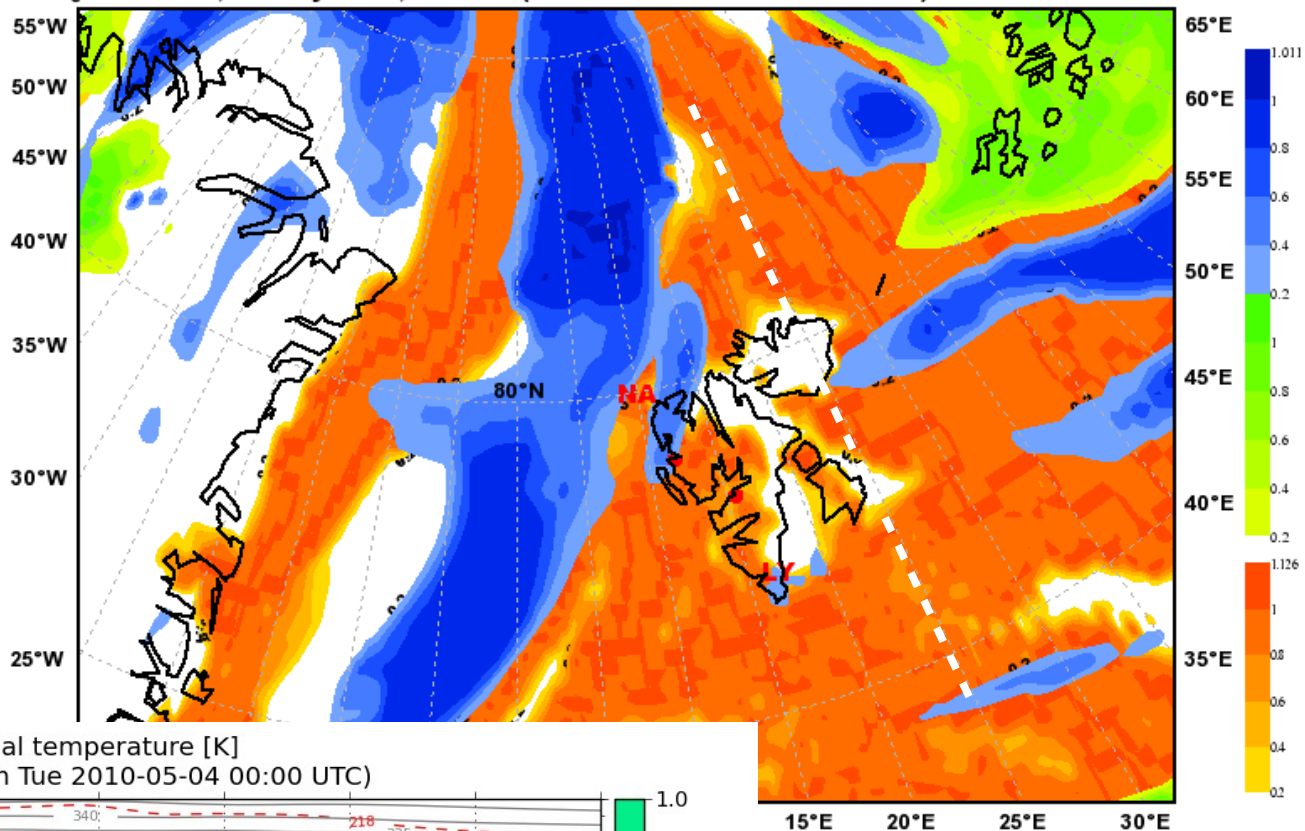
# N-S along 10E

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 21:00 UTC (step 45 hrs from Tue 2010-05-04 00:00 UTC)



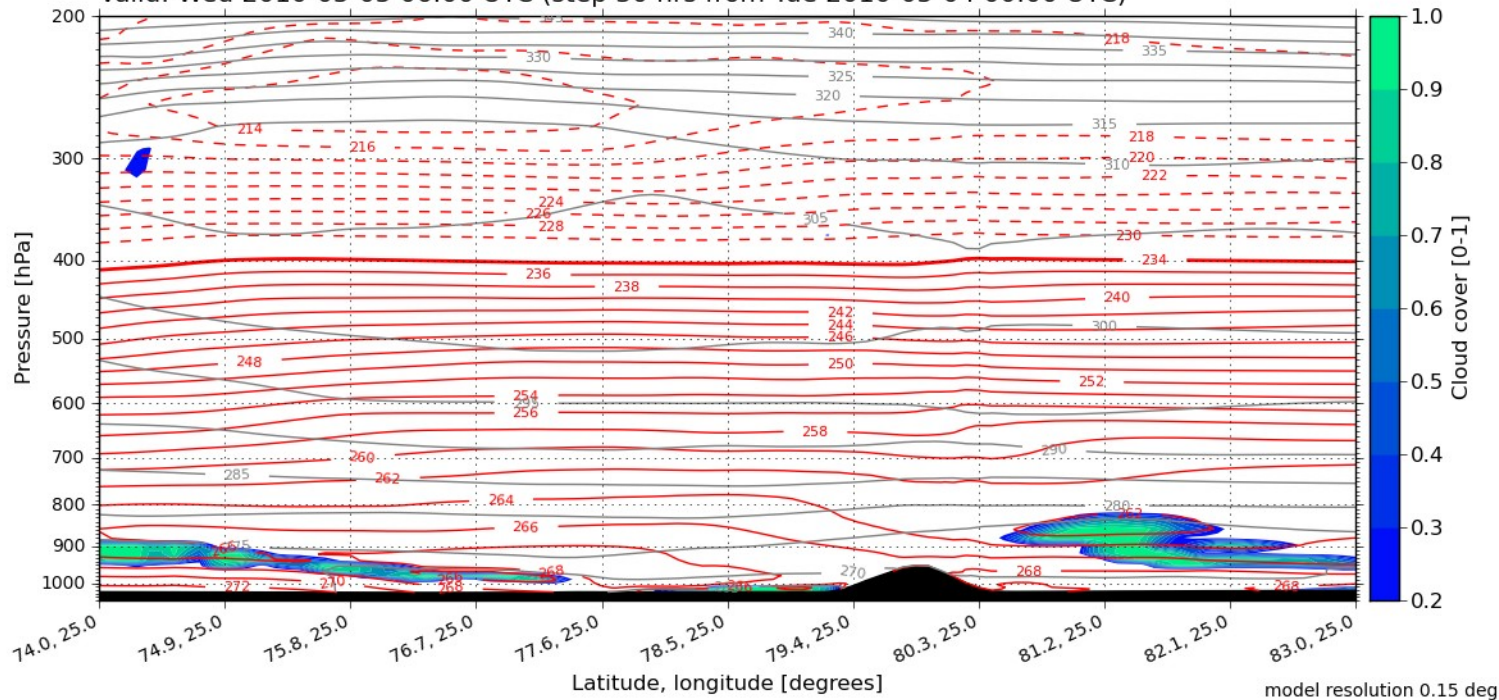
model resolution 0.15 deg

**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 06 UTC (init: 20100504 00 UTC +030 h)



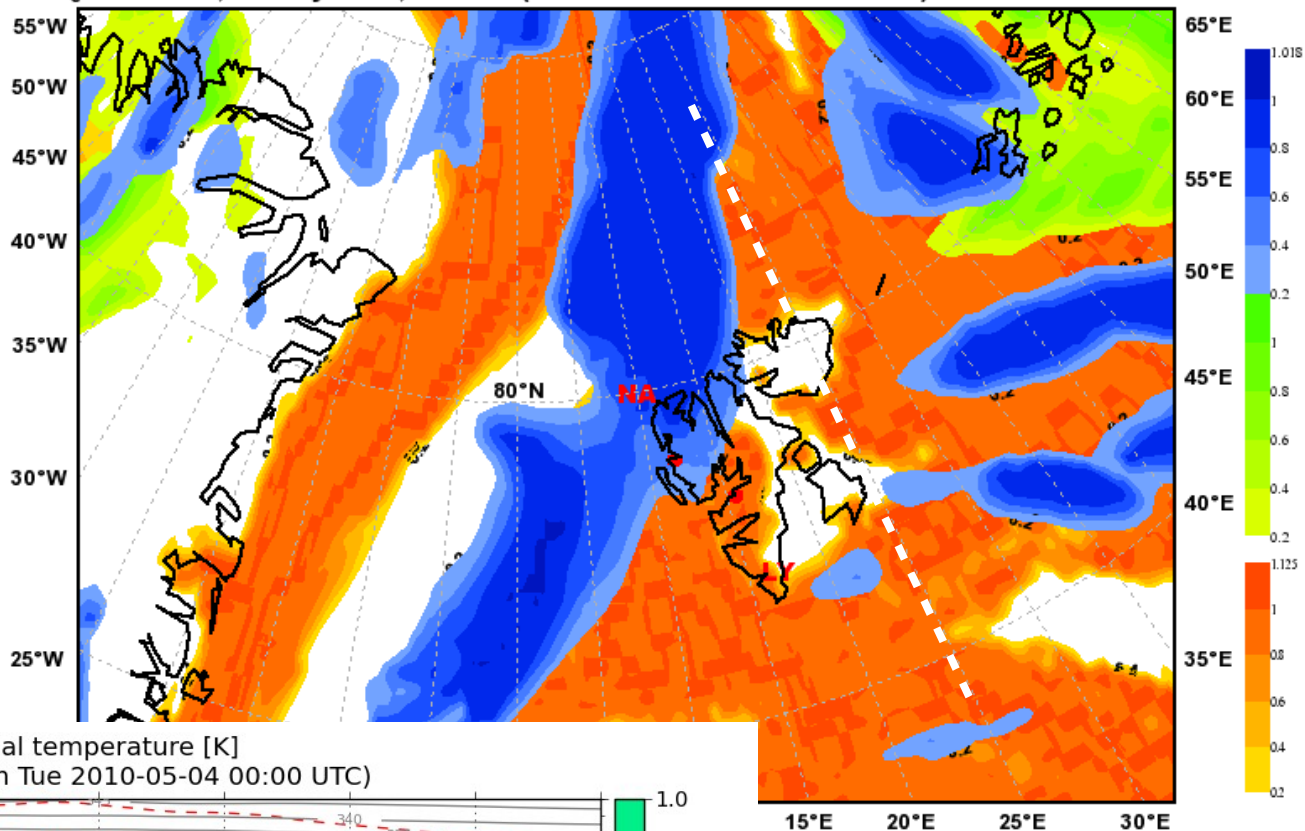
## N-S along 25E

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 06:00 UTC (step 30 hrs from Tue 2010-05-04 00:00 UTC)



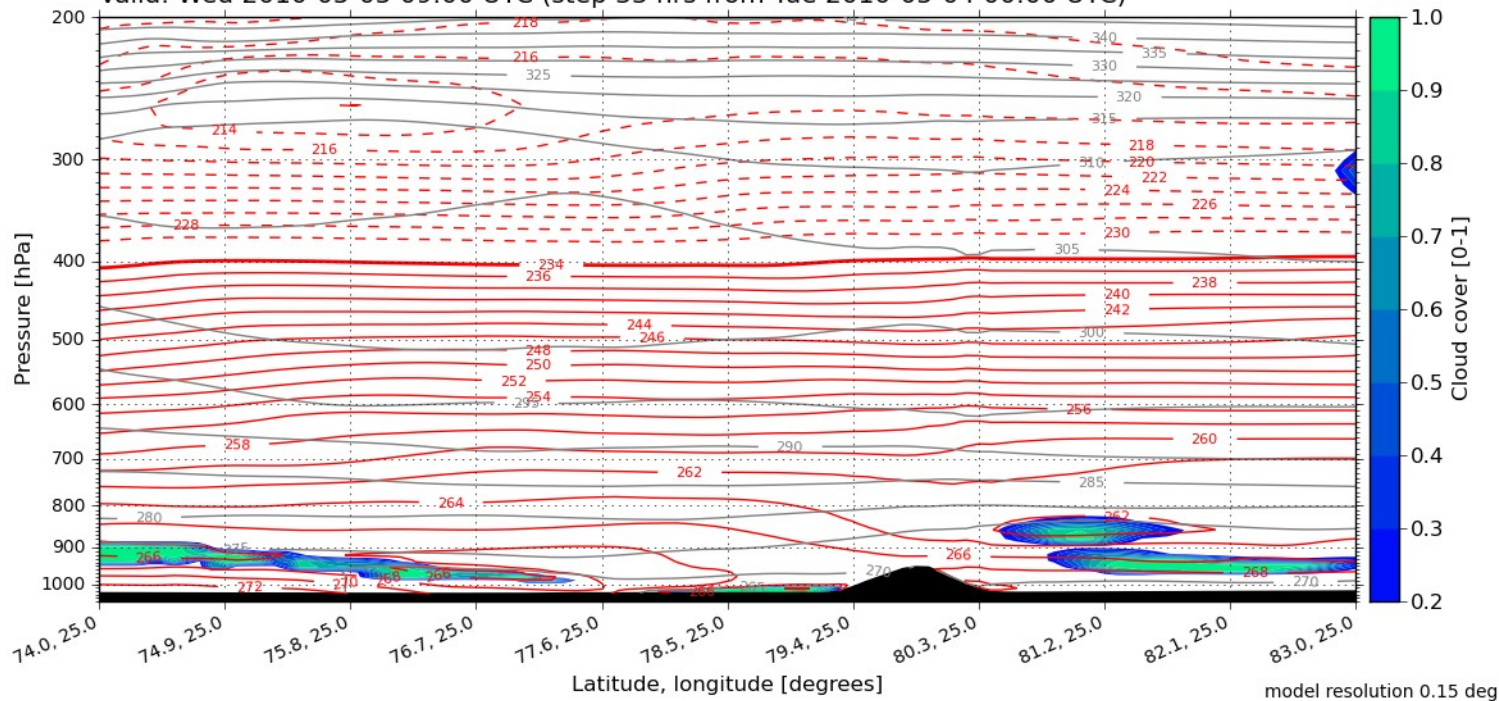


Total Cloud Cover  
Valid: Wed, 05 May 2010, 09 UTC (init: 20100504 00 UTC +033 h)



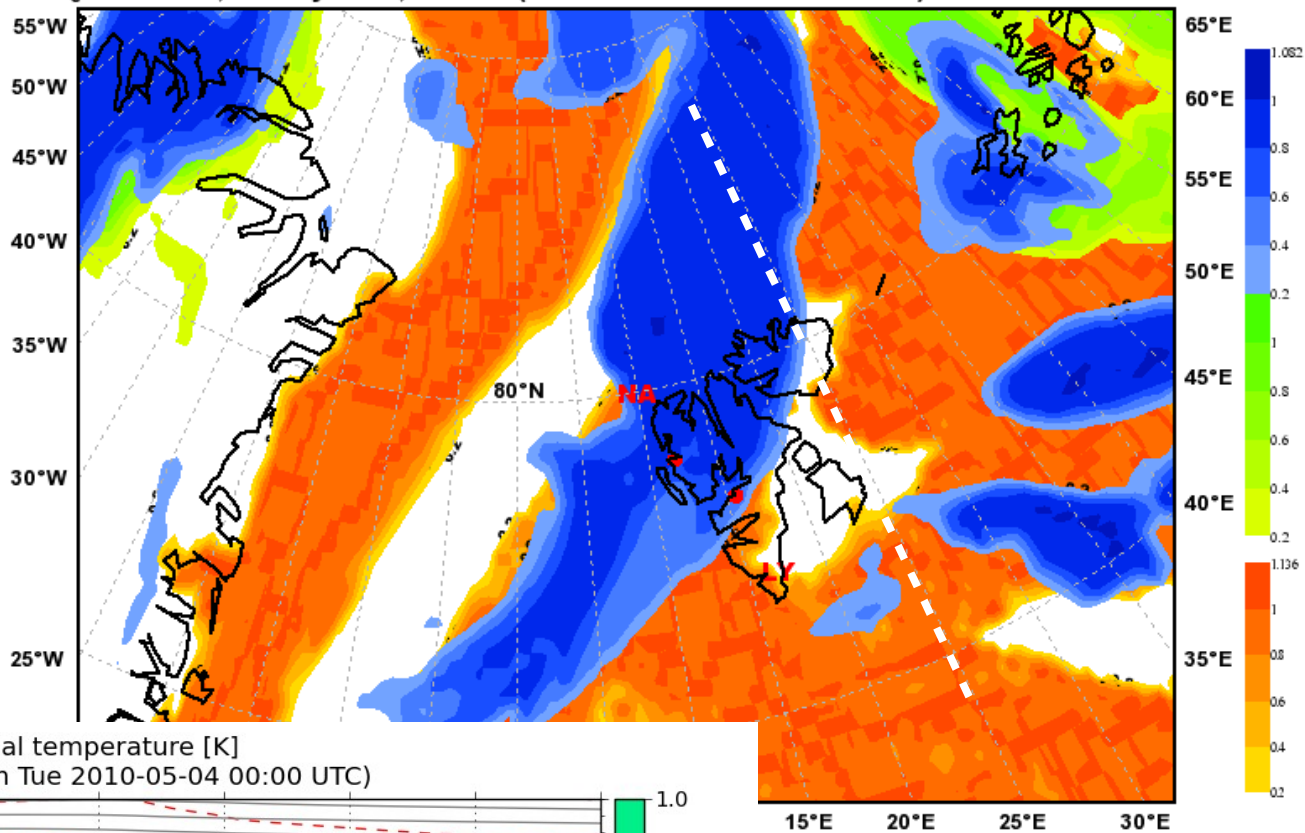
## N-S along 25E

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
Valid: Wed 2010-05-05 09:00 UTC (step 33 hrs from Tue 2010-05-04 00:00 UTC)



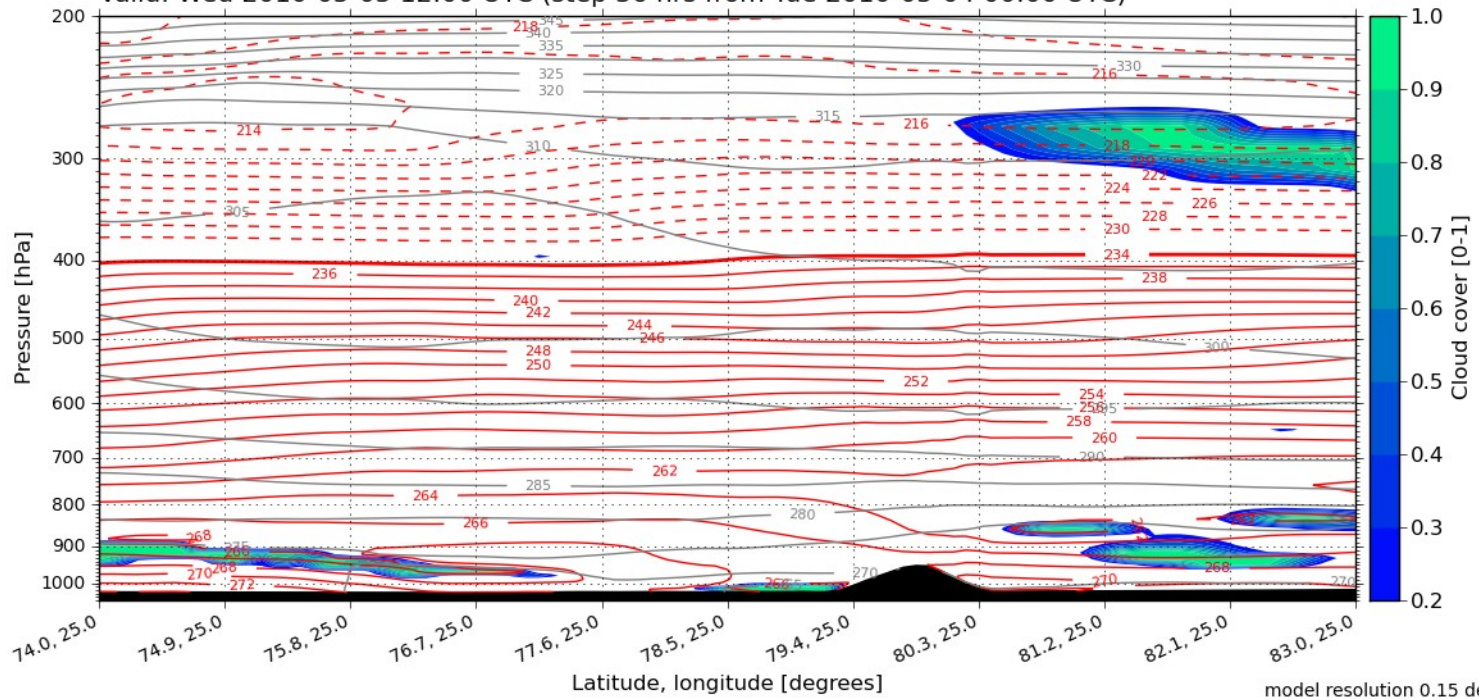


**Total Cloud Cover**  
 valid: Wed, 05 May 2010, 12 UTC (init: 20100504 00 UTC +036 h)



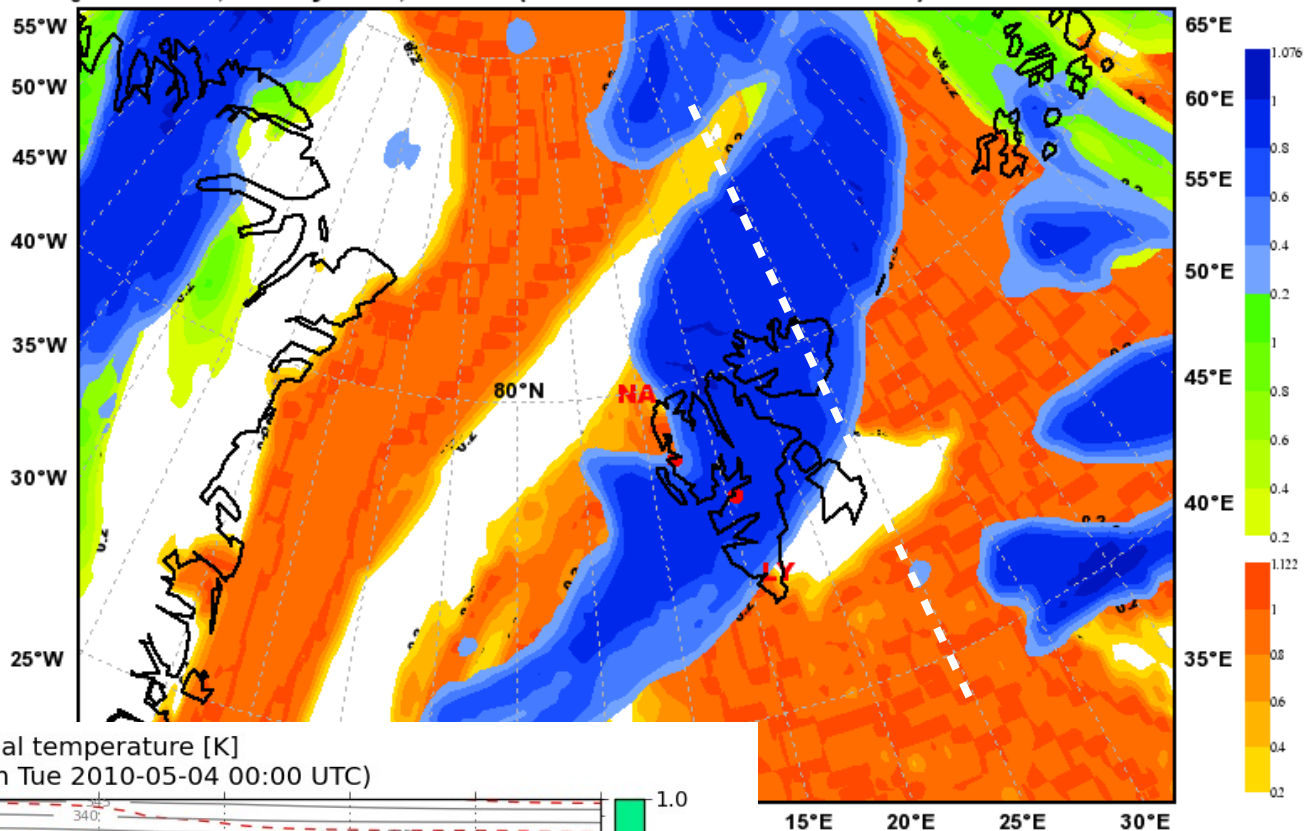
# N-S along 25E

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 12:00 UTC (step 36 hrs from Tue 2010-05-04 00:00 UTC)



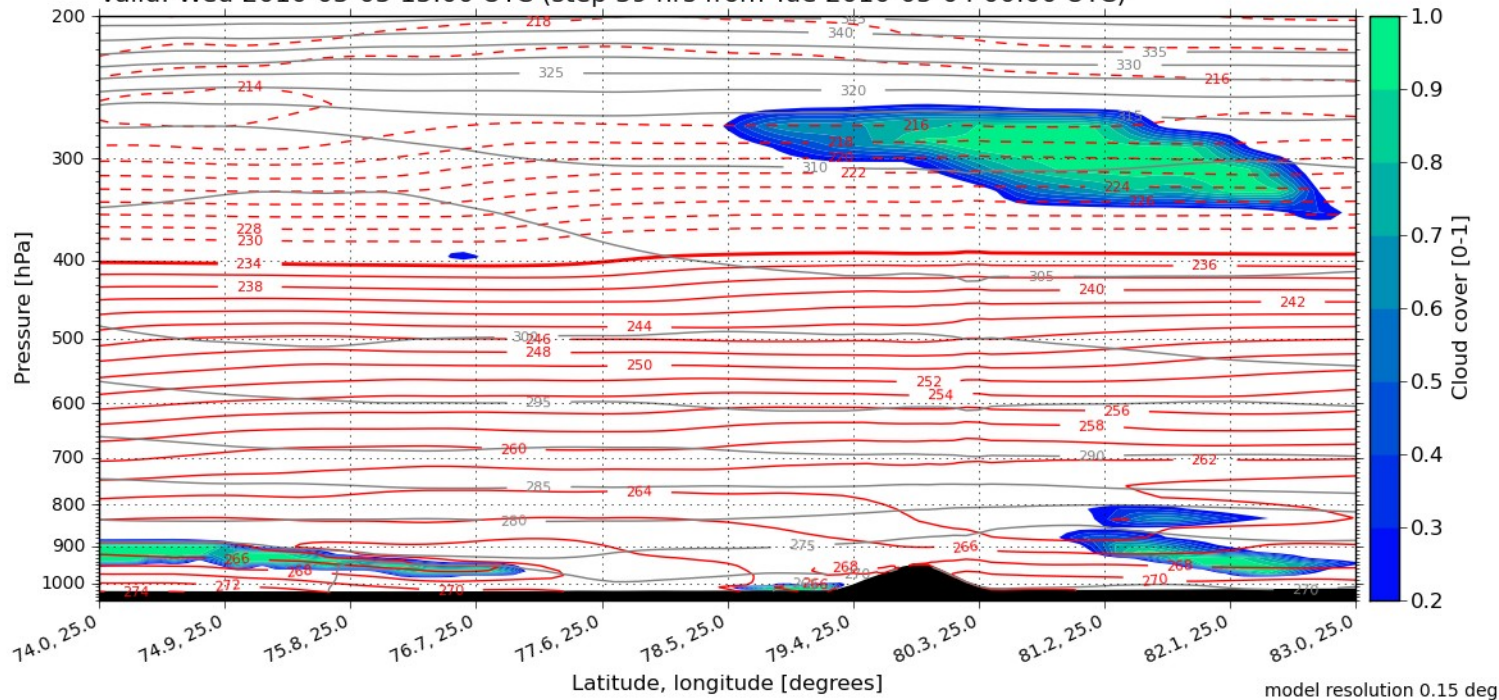
model resolution 0.15 deg

Total Cloud Cover  
Valid: Wed, 05 May 2010, 15 UTC (init: 20100504 00 UTC +039 h)



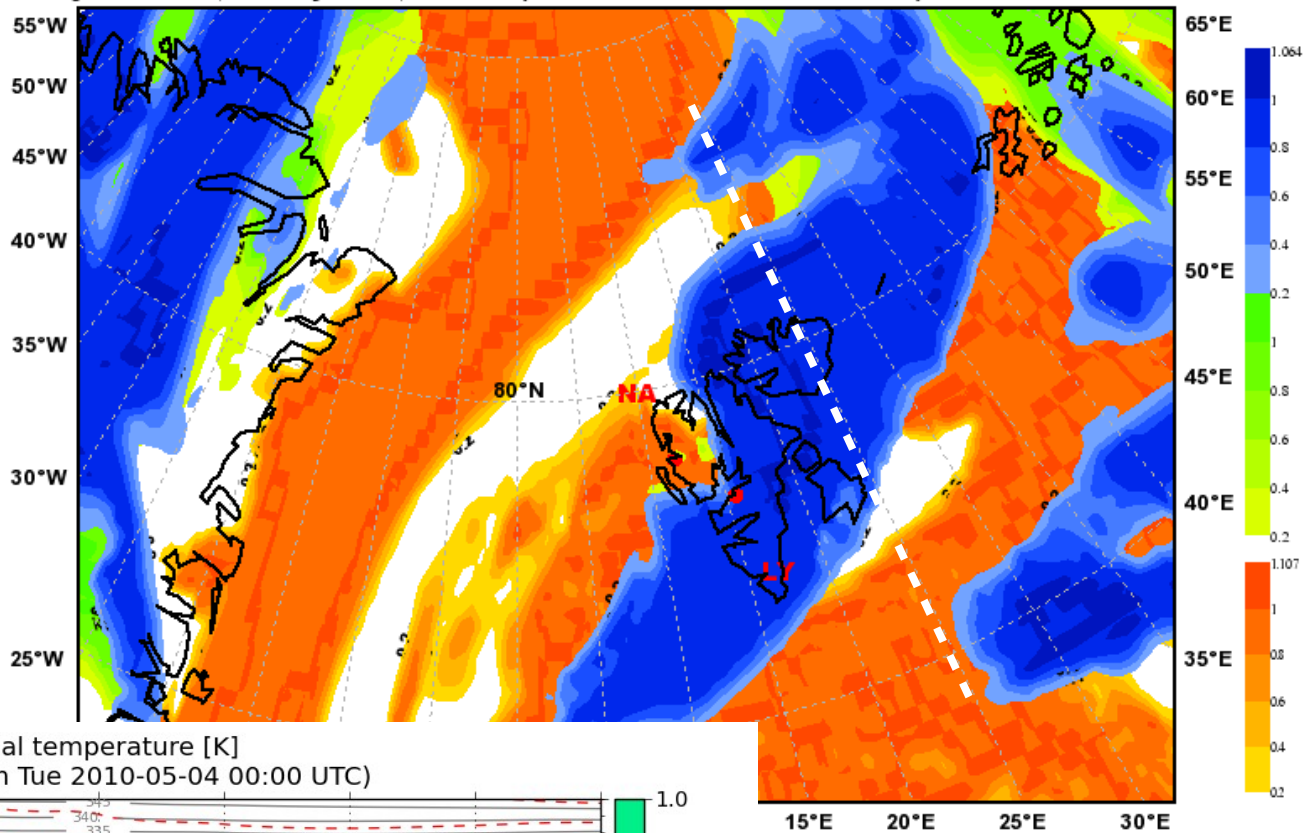
## N-S along 25E

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
Valid: Wed 2010-05-05 15:00 UTC (step 39 hrs from Tue 2010-05-04 00:00 UTC)



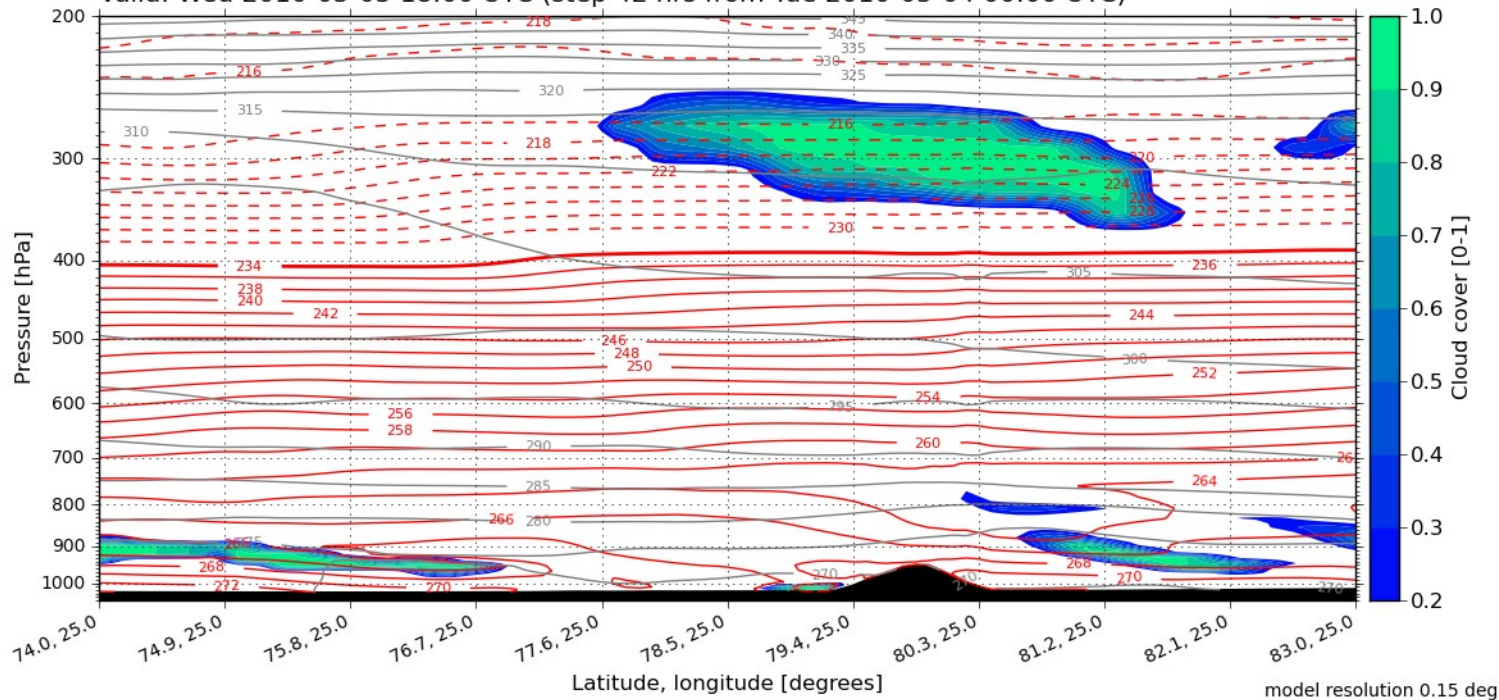


**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 18 UTC (init: 20100504 00 UTC +042 h)

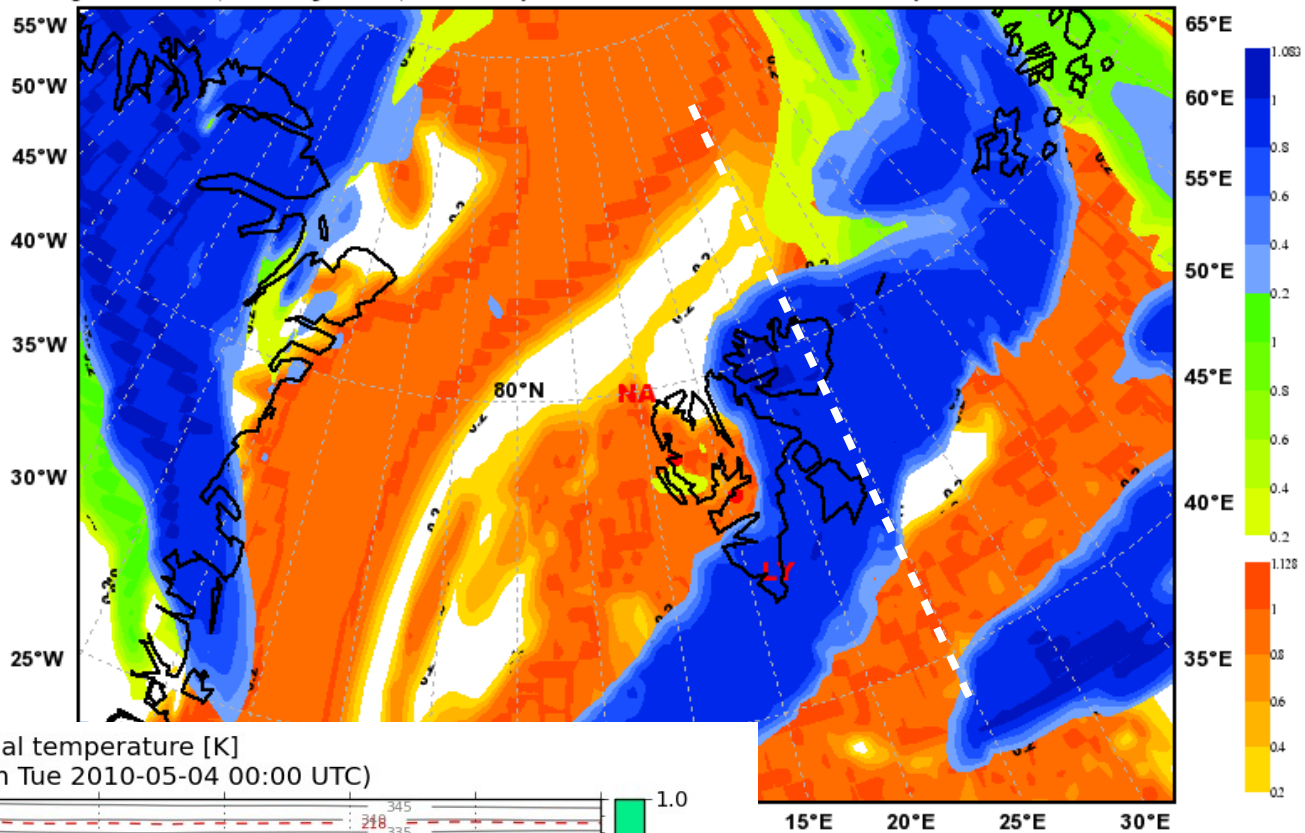


# N-S along 25E

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 18:00 UTC (step 42 hrs from Tue 2010-05-04 00:00 UTC)

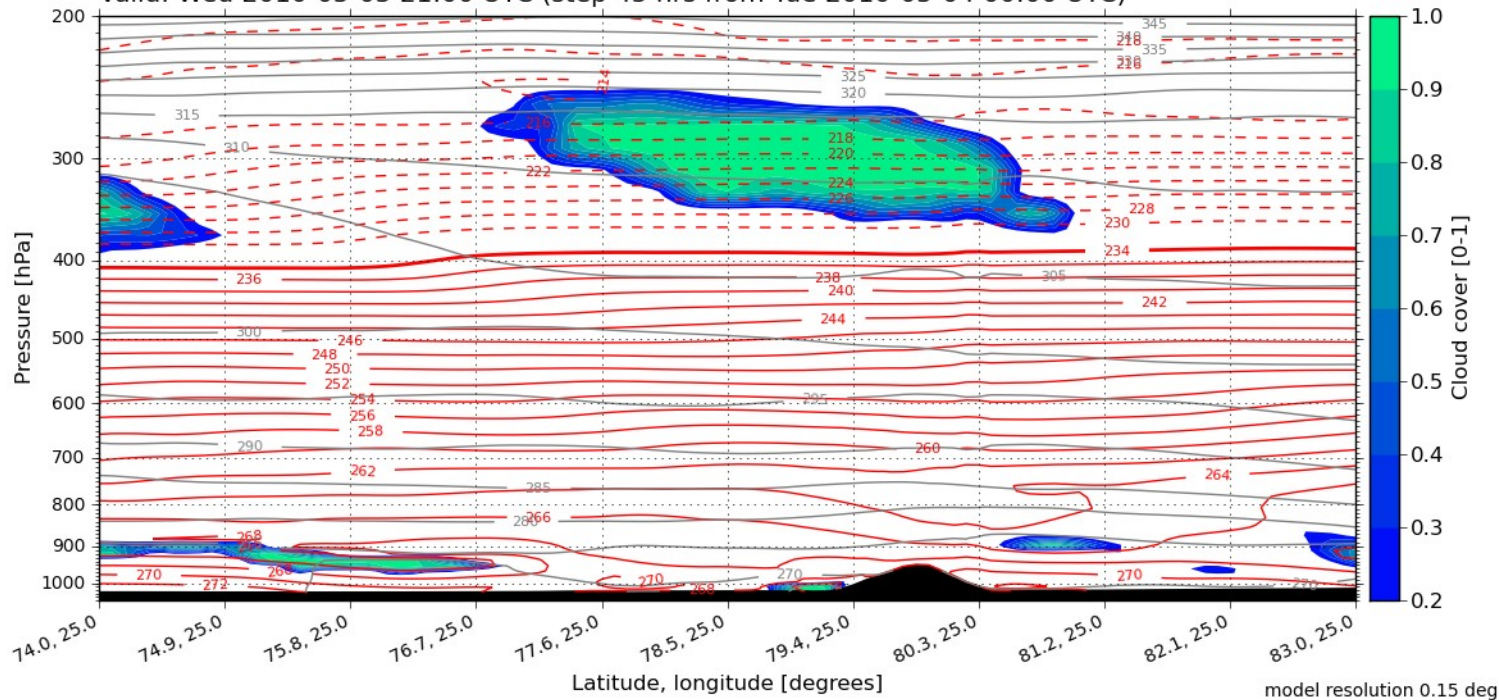


**Total Cloud Cover**  
 Valid: Wed, 05 May 2010, 21 UTC (init: 20100504 00 UTC +045 h)



# N-S along 25E

Cloud cover [0-1] with temperature [K] and potential temperature [K]  
 Valid: Wed 2010-05-05 21:00 UTC (step 45 hrs from Tue 2010-05-04 00:00 UTC)



model resolution 0.15 deg