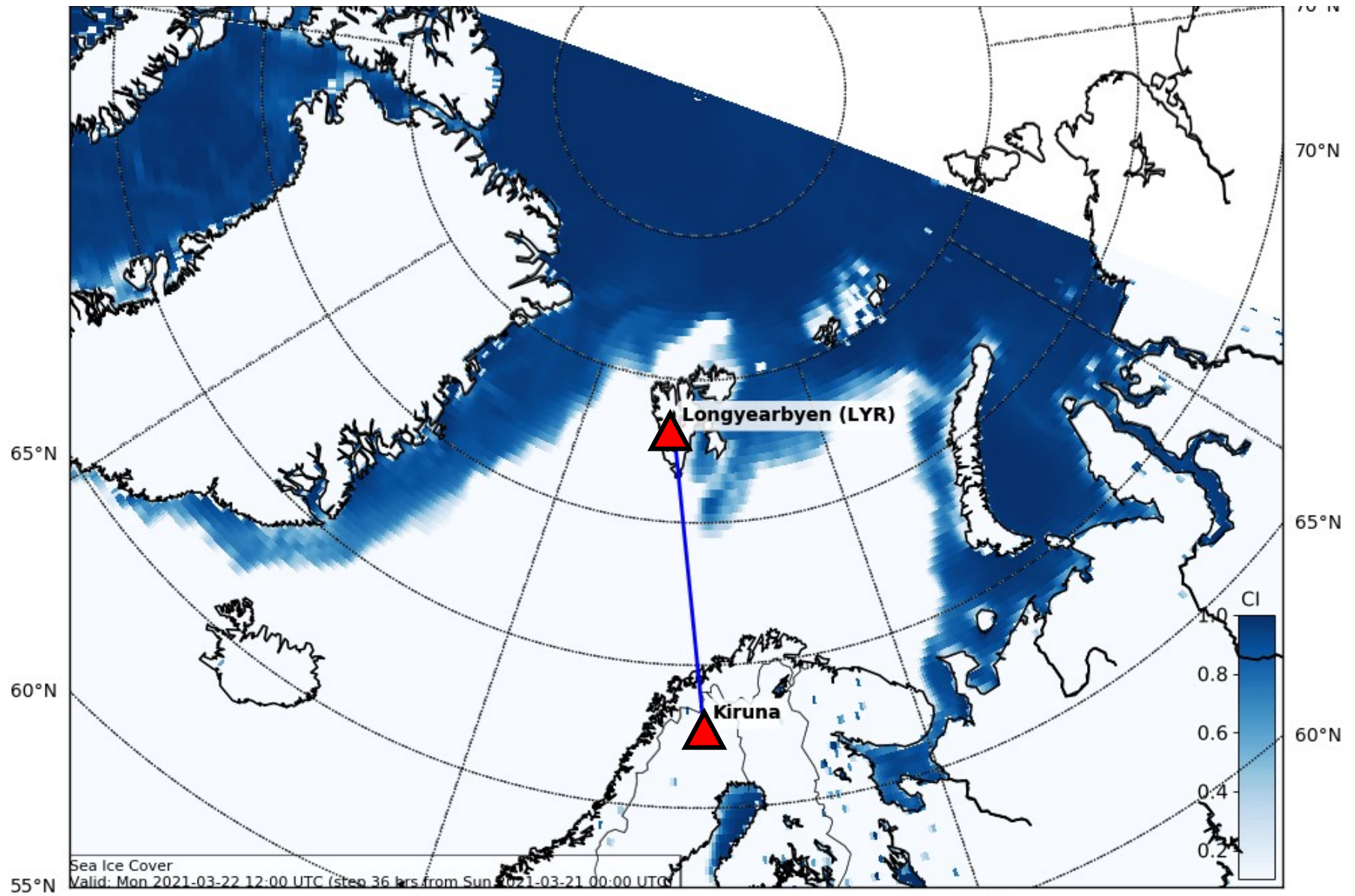


# Weather briefing HALO-(AC)<sup>3</sup>

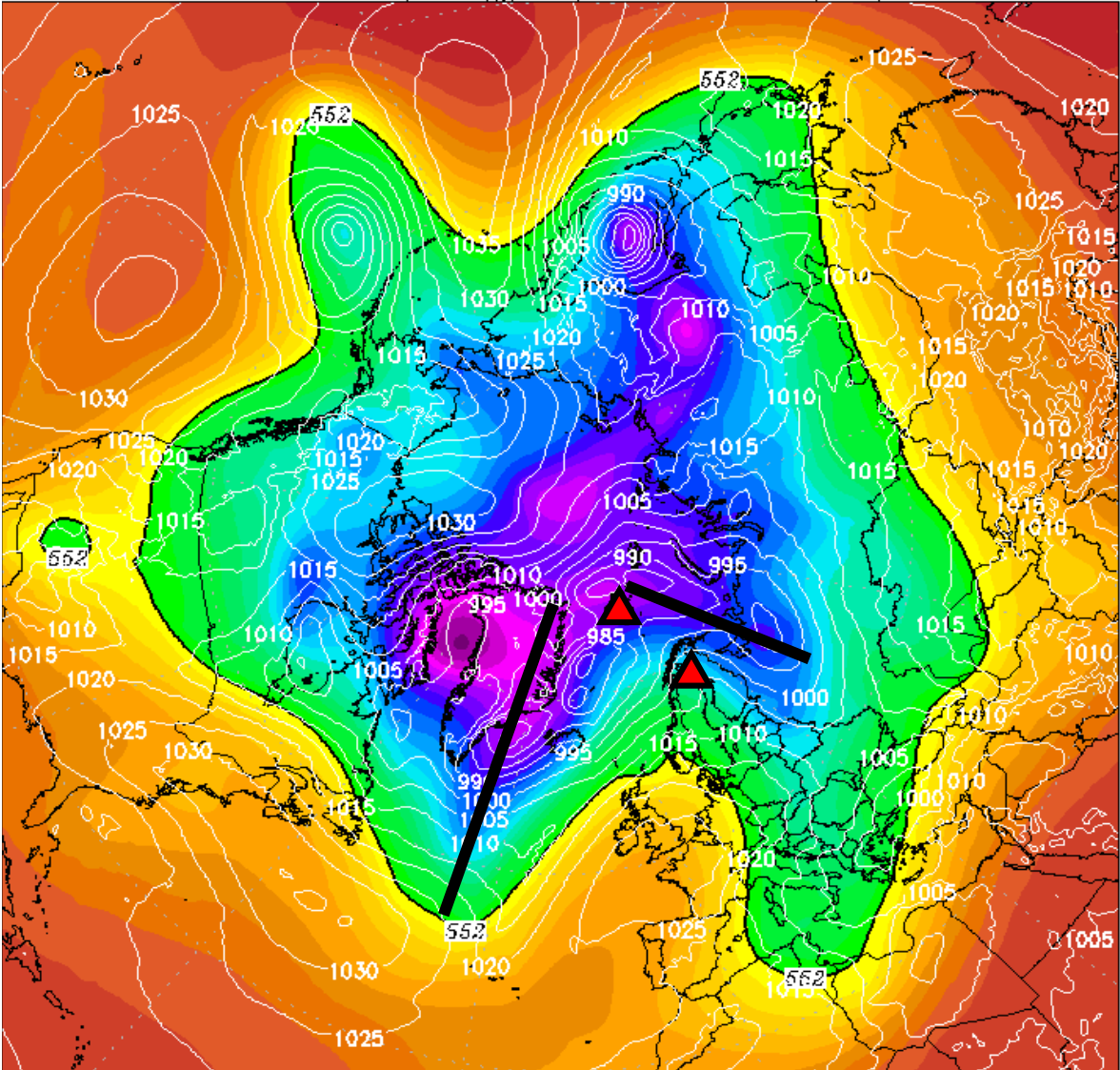
22 March 2021 – 25 March 2021

Monday, 22 March 2021

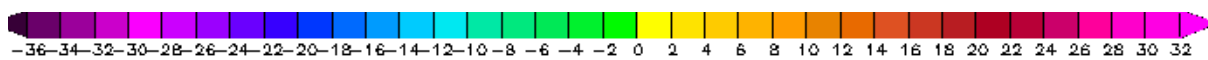
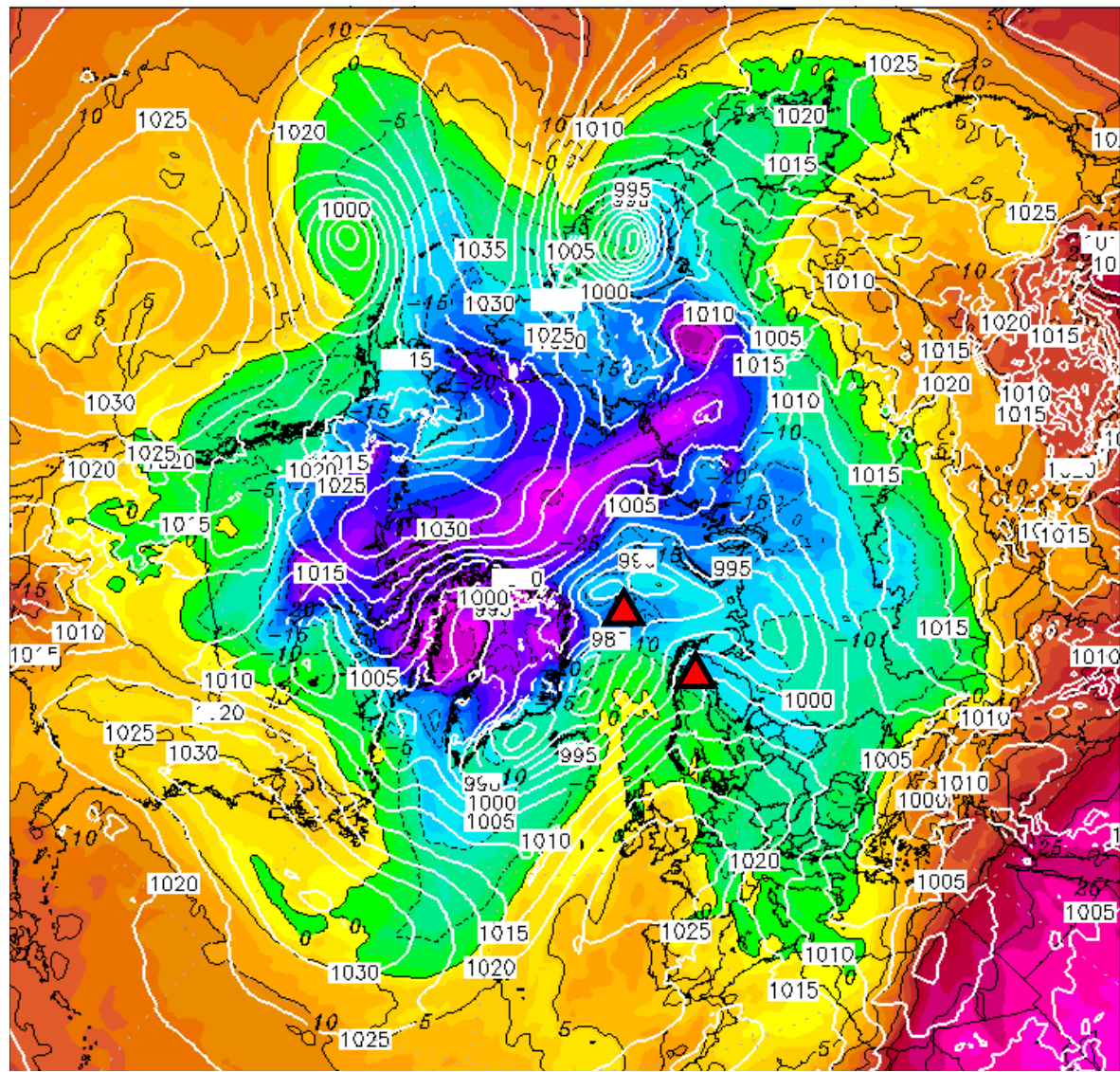
# Sea ice cover (Mon, 22.03. 00 UTC)



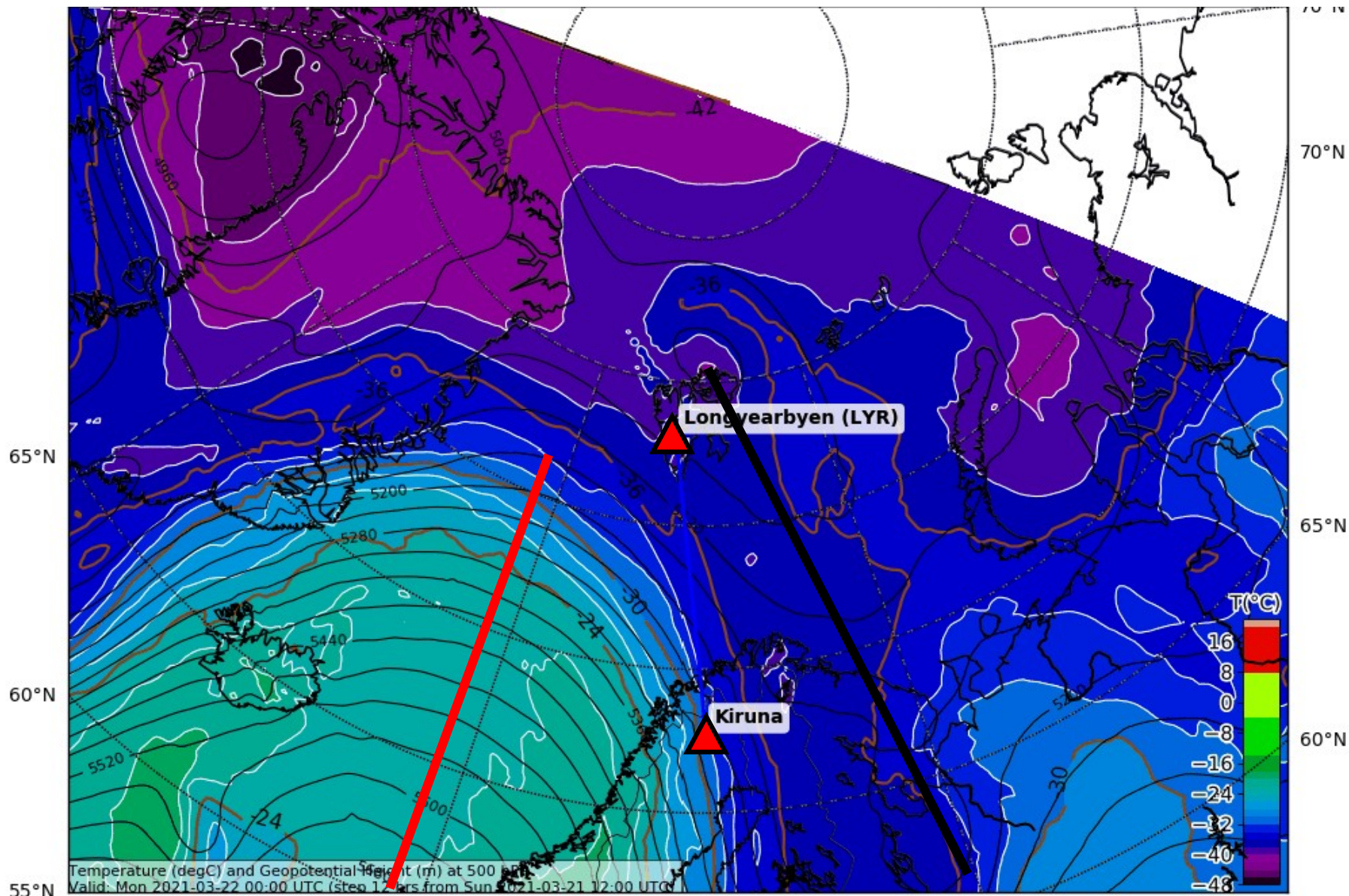
# Geopotential 500hpa (gpdm) & Surface Pressure (hPa) (Mon, 22.03. 00 UTC, ECMWF)



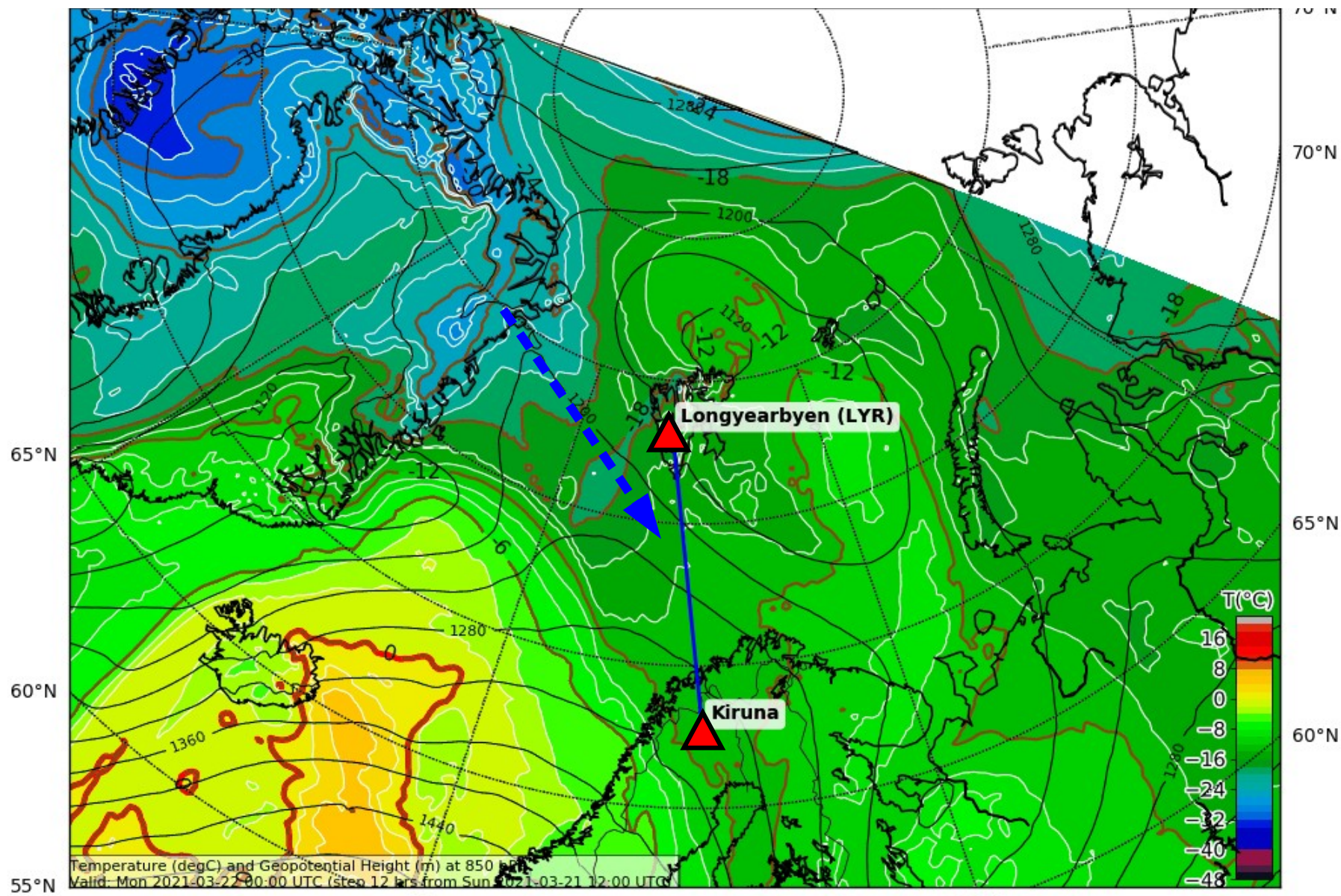
# Temperature 850 hPa (°C) & Surface Pressure (hPa) (Mon, 22.03. 00 UTC, ECMWF)



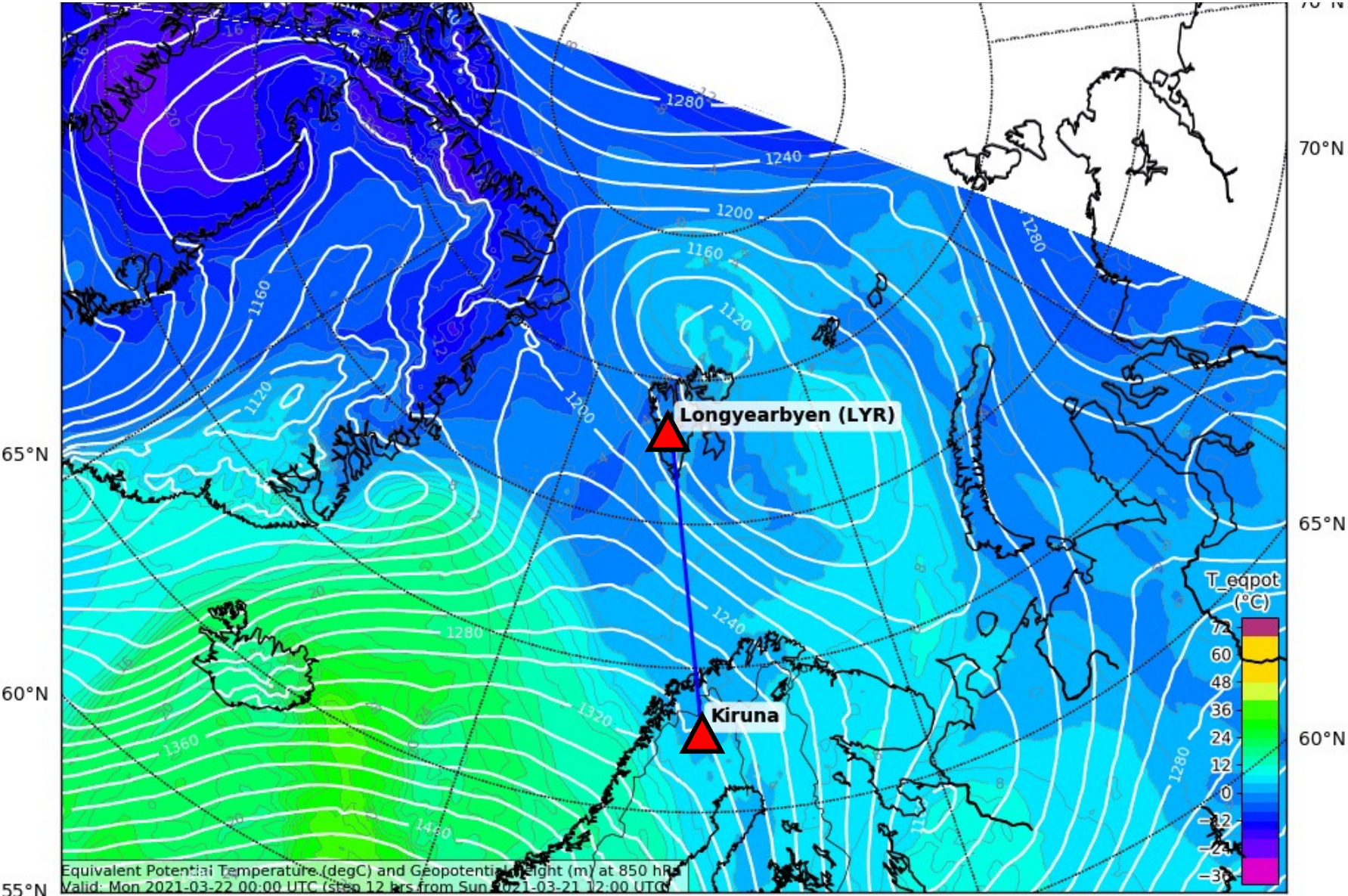
# 500 hPa: Temperature (°C) & Geopotential (gpm) (Mon, 22.03. 00 UTC, ECMWF)



# 850 hPa: Temperature (°C) & Geopotential (gpm) (Mon, 22.03. 00 UTC, ECMWF)

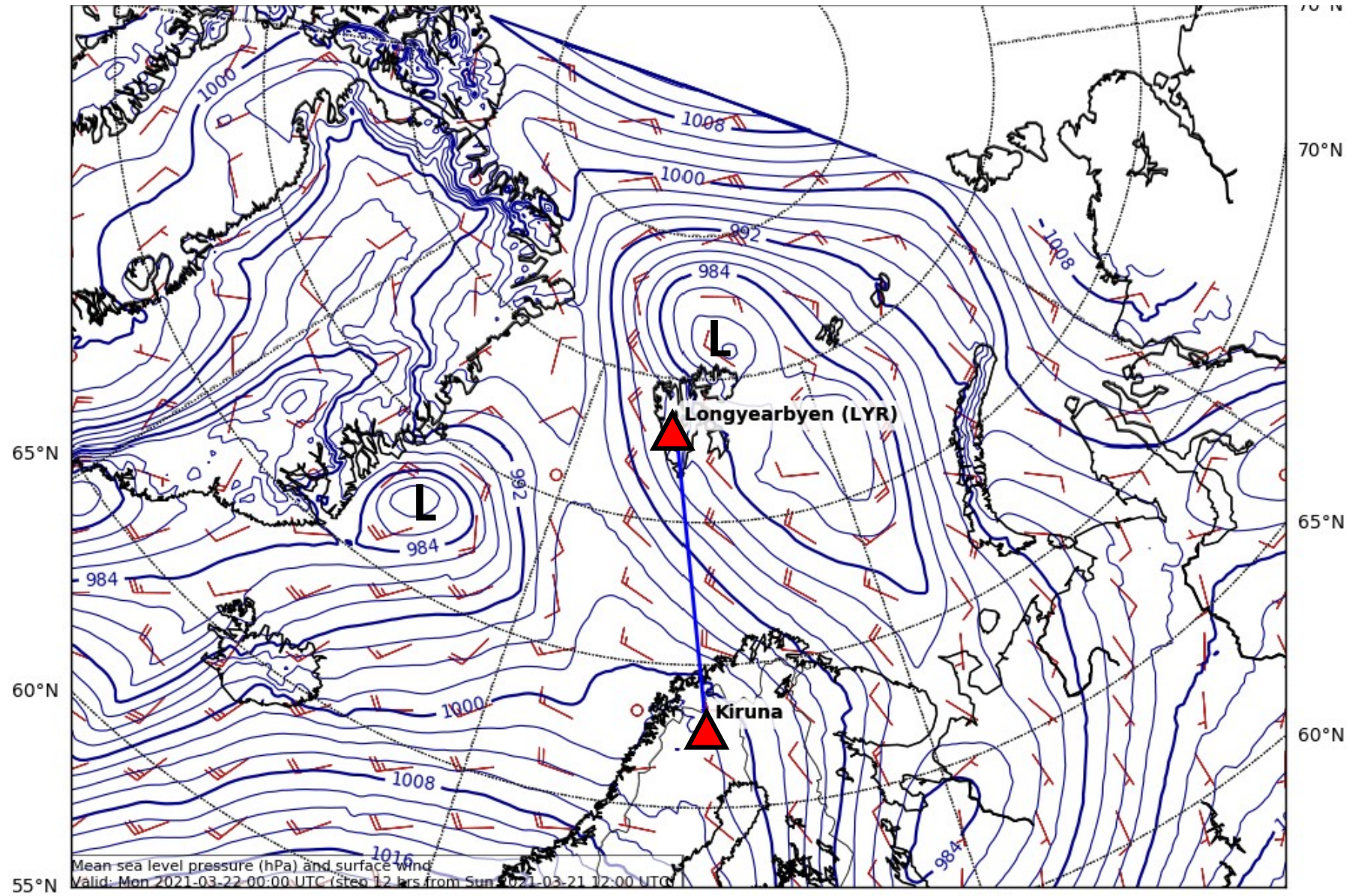


# 850 hPa: Eqi. Pot. Temperature (°C) & Geopotential (gpdm) (Mon, 22.03. 00 UTC, ECMWF)



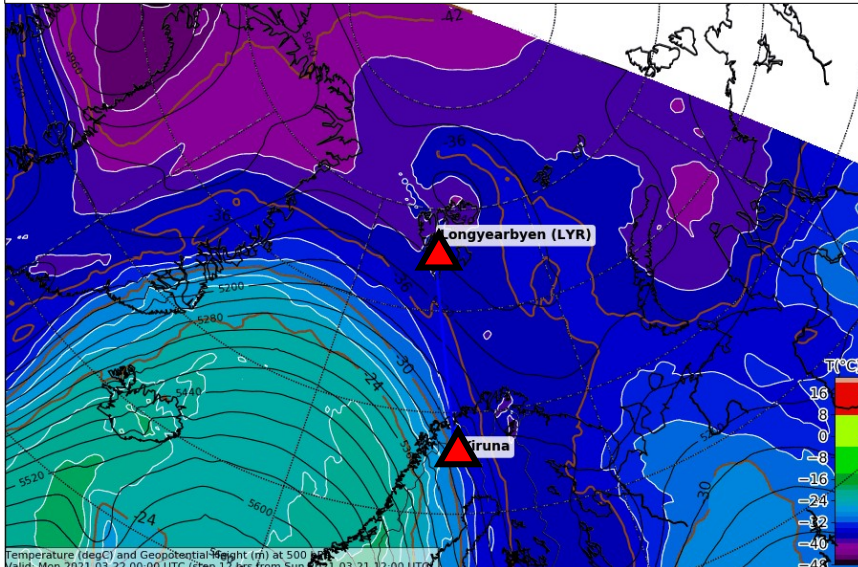


# Mean sea level pressure (hPa) and surface wind (Mon, 22.03. 00 UTC, ECMWF)

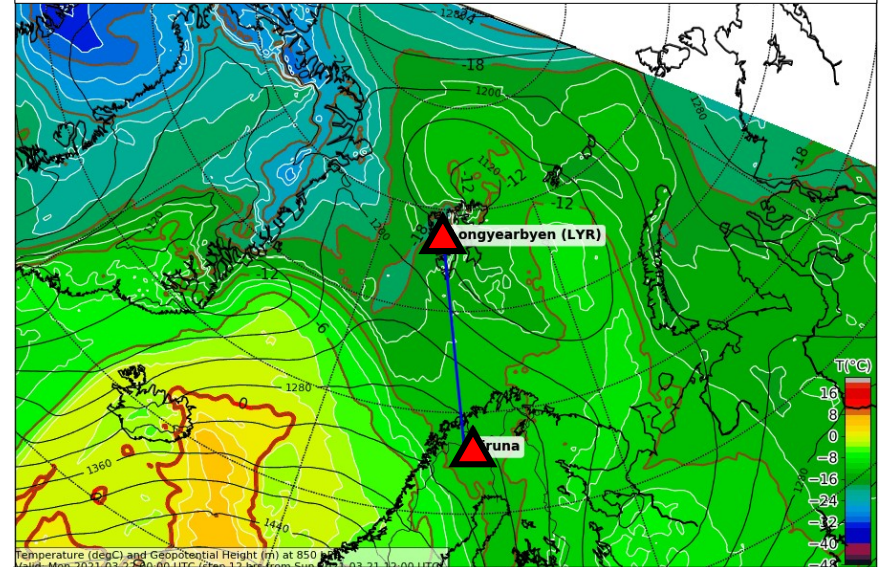


# General weather situation (Mon, 22.03 00 UTC, ECMWF)

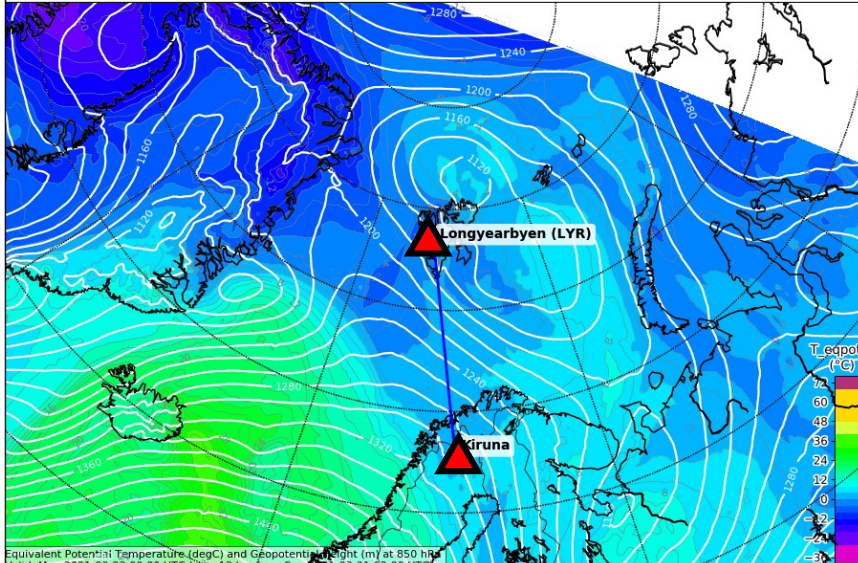
## 500 hPa: Temperature & Geopotential



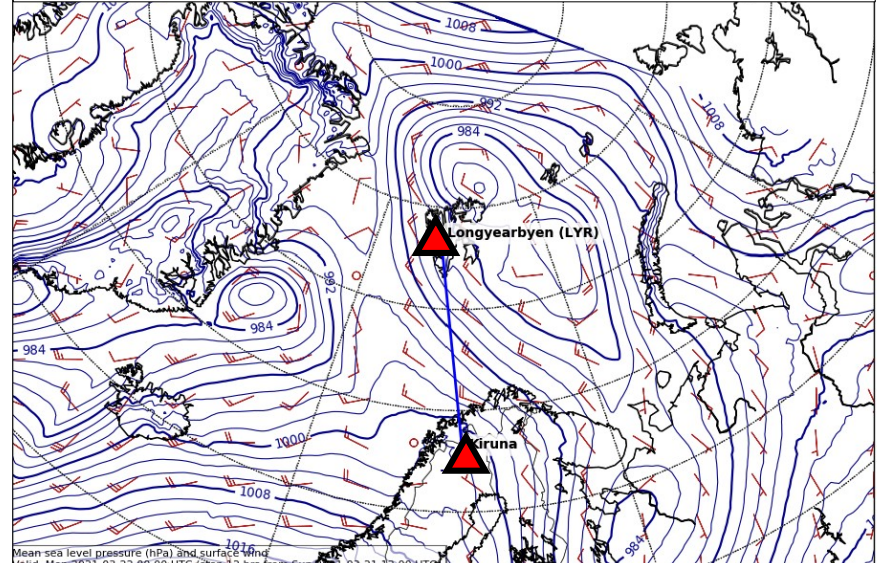
## 850 hPa: Temperature & Geopotential



## 850 hPa: Equi. Pot. Temperature & Geopotential

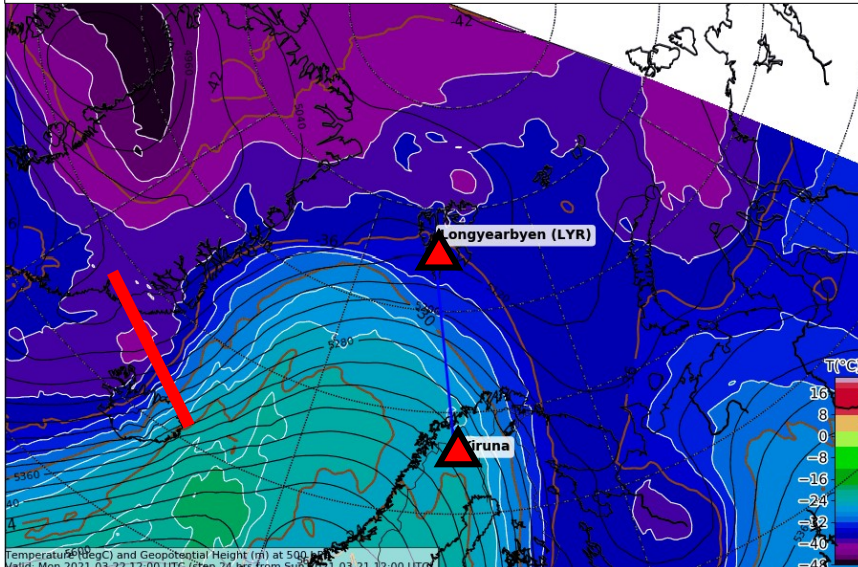


## Mean sea level pressure and surface wind

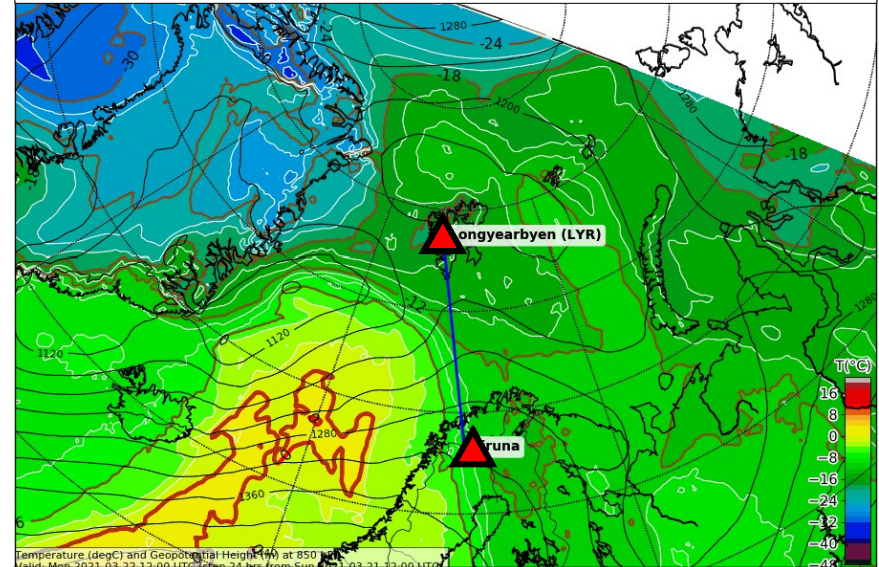


# General weather situation (Mon, 22.03 12 UTC, ECMWF)

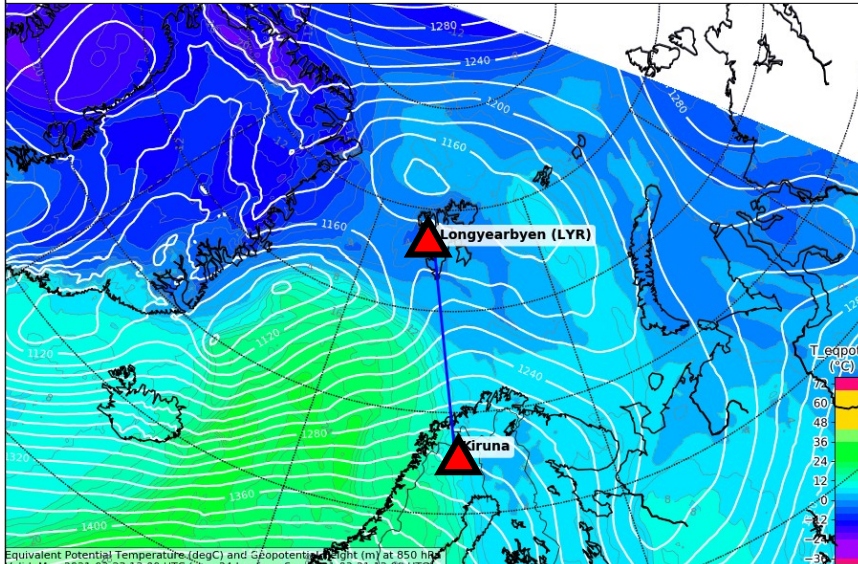
## 500 hPa: Temperature & Geopotential



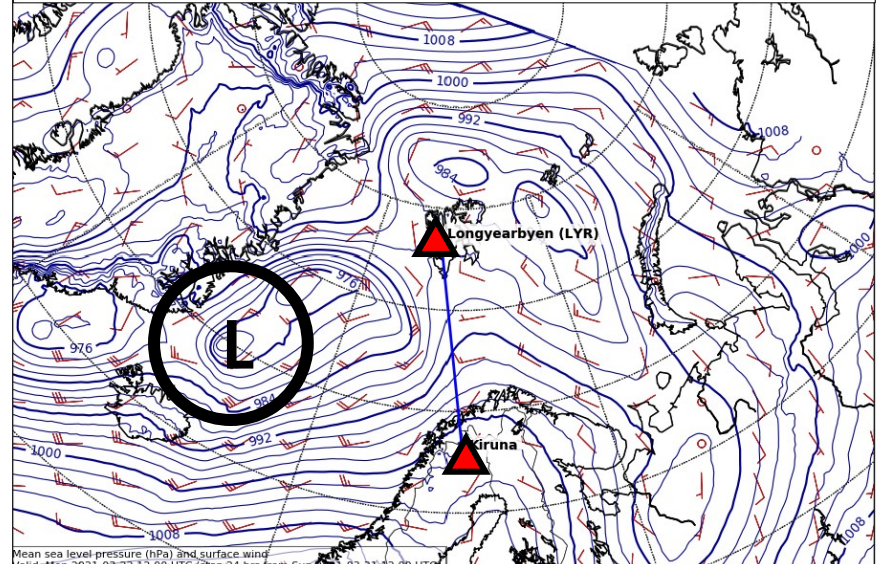
## 850 hPa: Temperature & Geopotential



## 850 hPa: Equi. Pot. Temperature & Geopotential

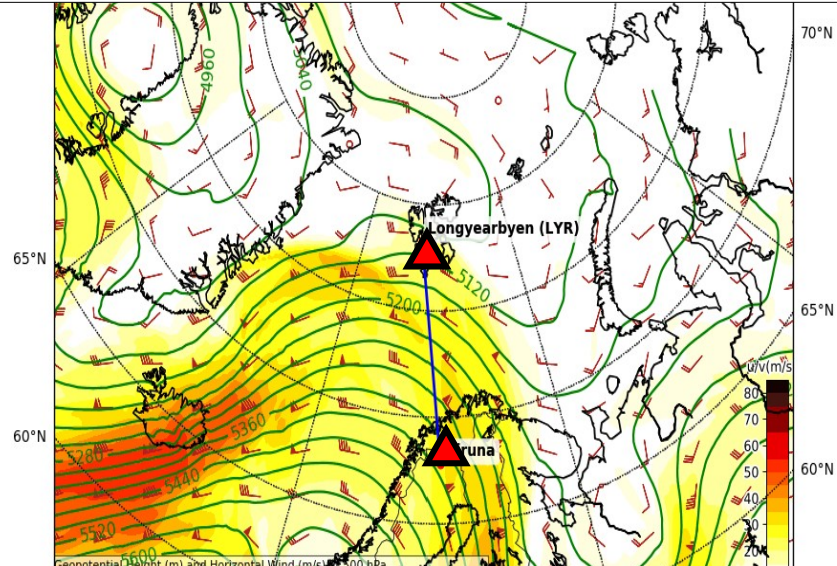


## Mean sea level pressure and surface wind

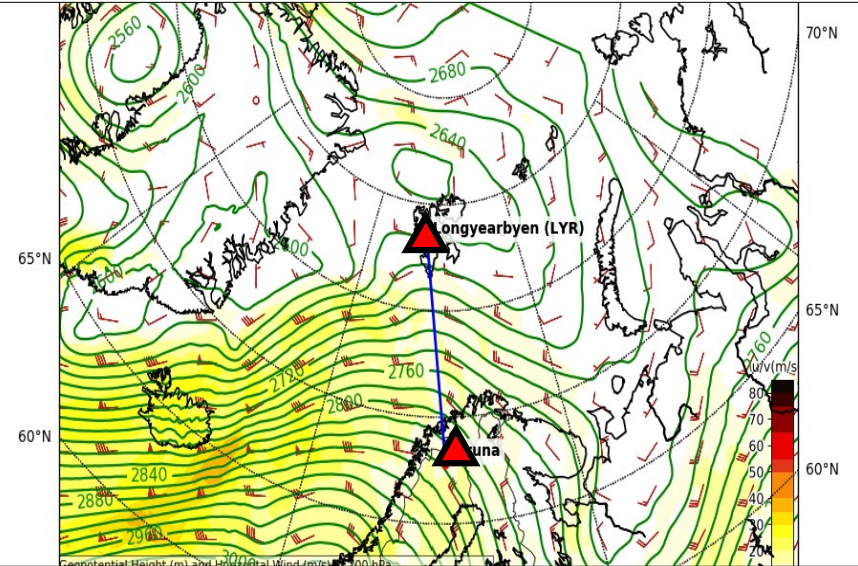


# Winds (Mon, 22.03 12 UTC, ECMWF)

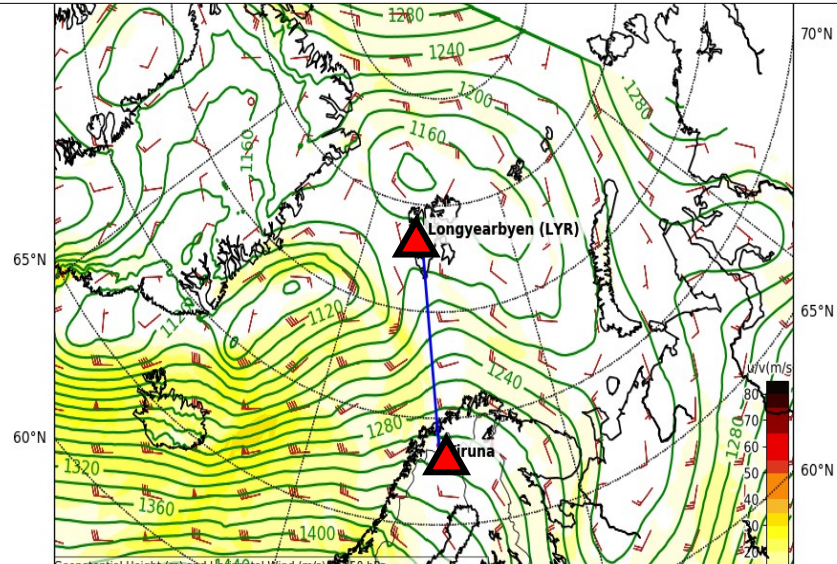
## 500 hPa: Wind & Geopotential



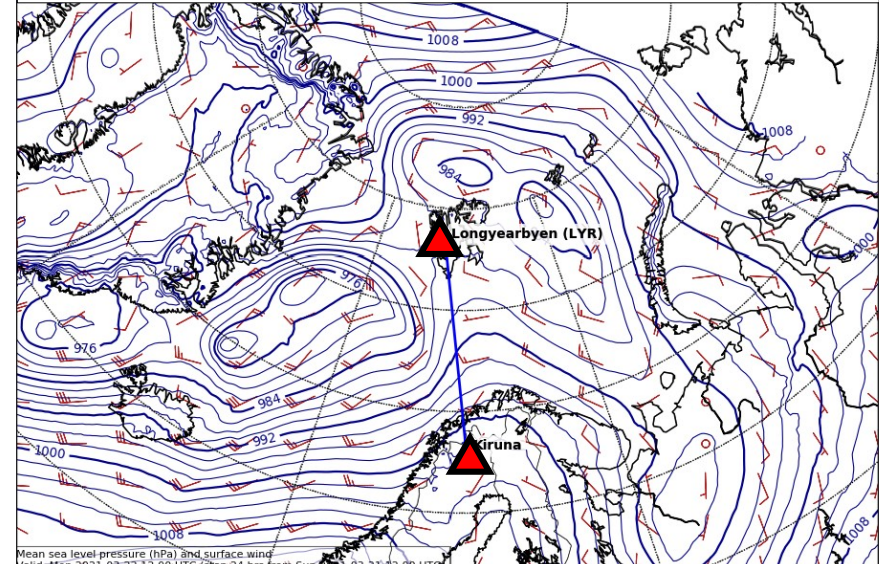
## 700 hPa: Wind & Geopotential



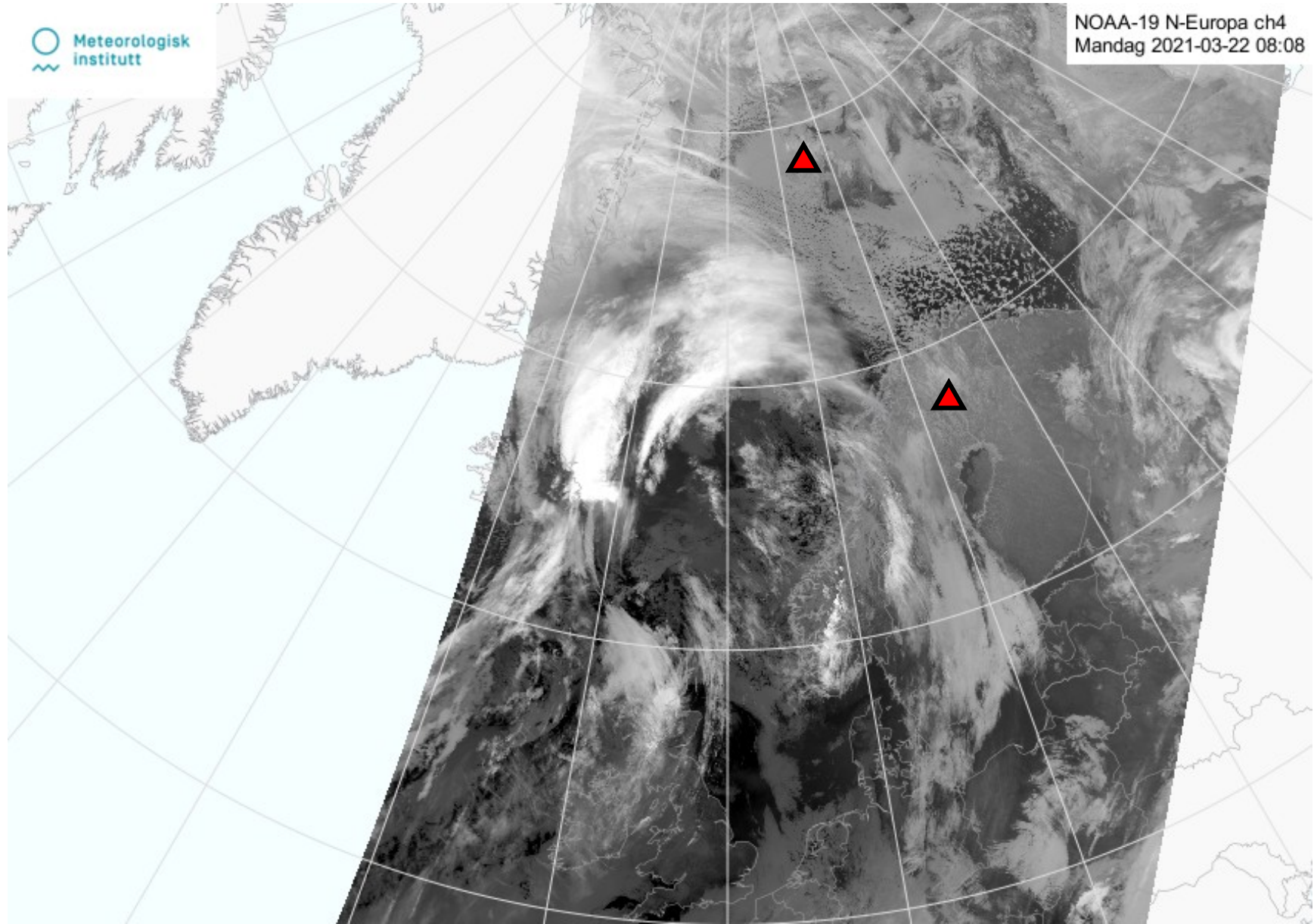
## 850 hPa: Wind & Geopotential



## Mean sea level pressure and surface wind



# Satellite Image



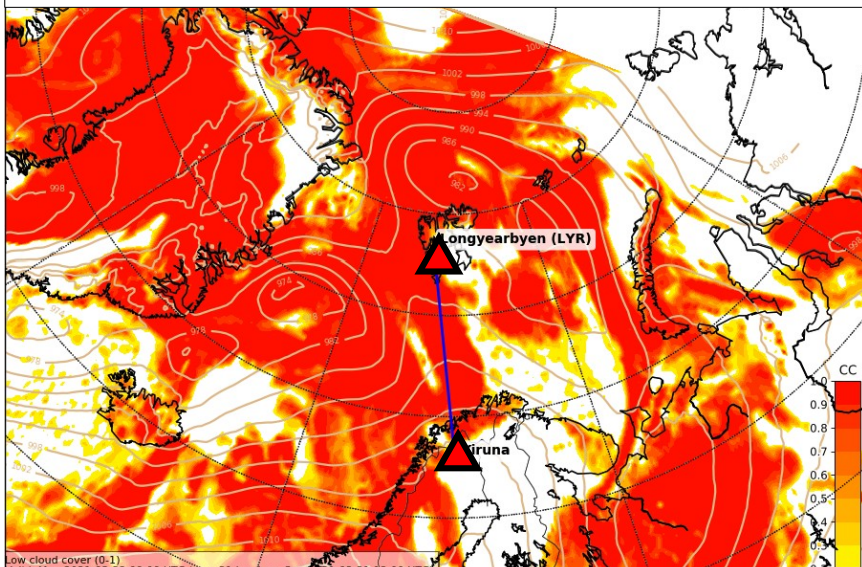
# Webcam Longyearbyen

PANORAMA PORT OF LONGYEARBYEN 360

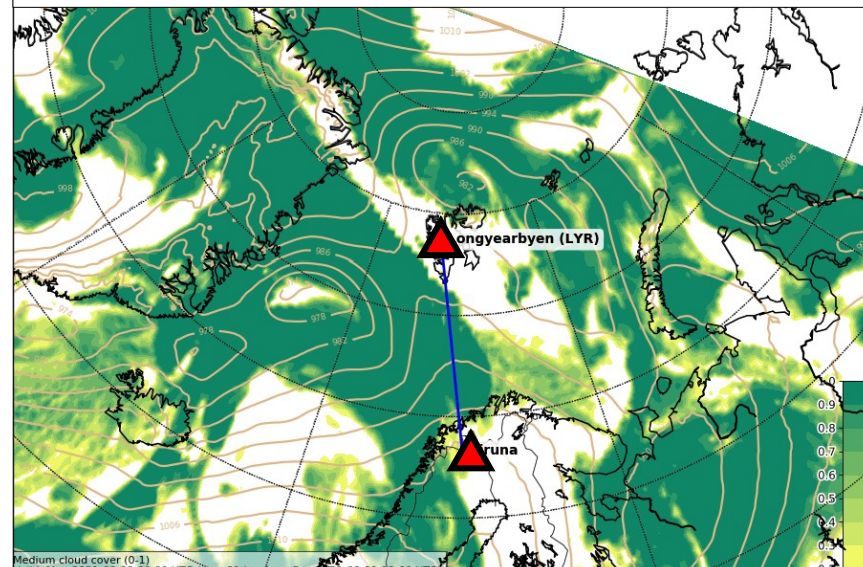


# Cloud cover (Mon, 22.03 09 UTC, ECMWF)

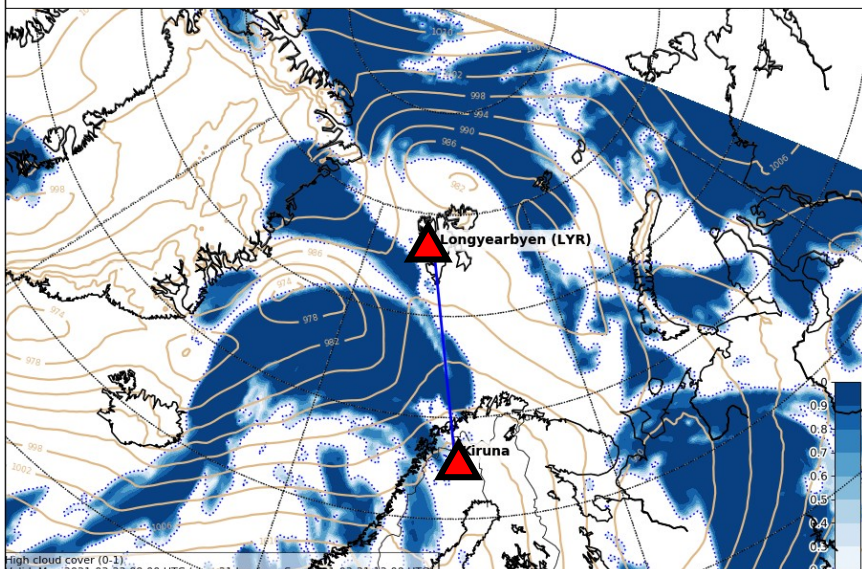
## Low-level clouds



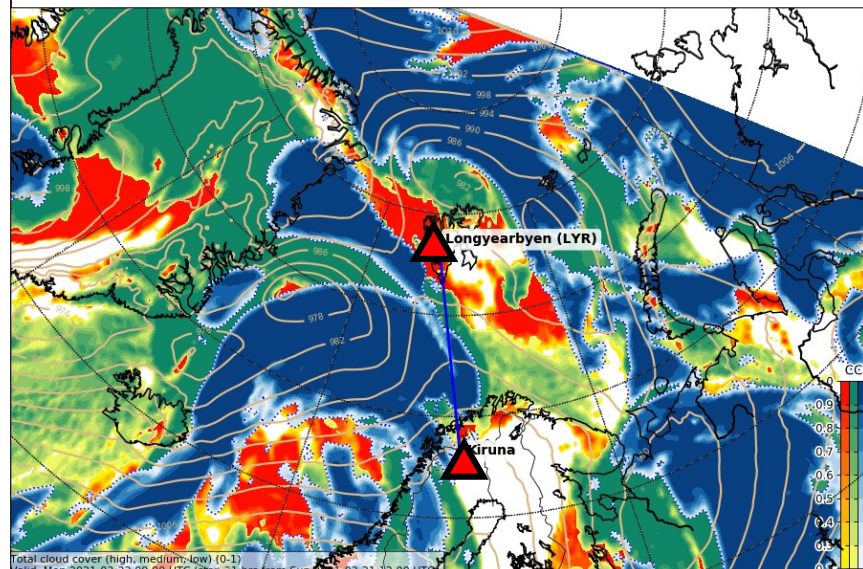
## Mid-level clouds



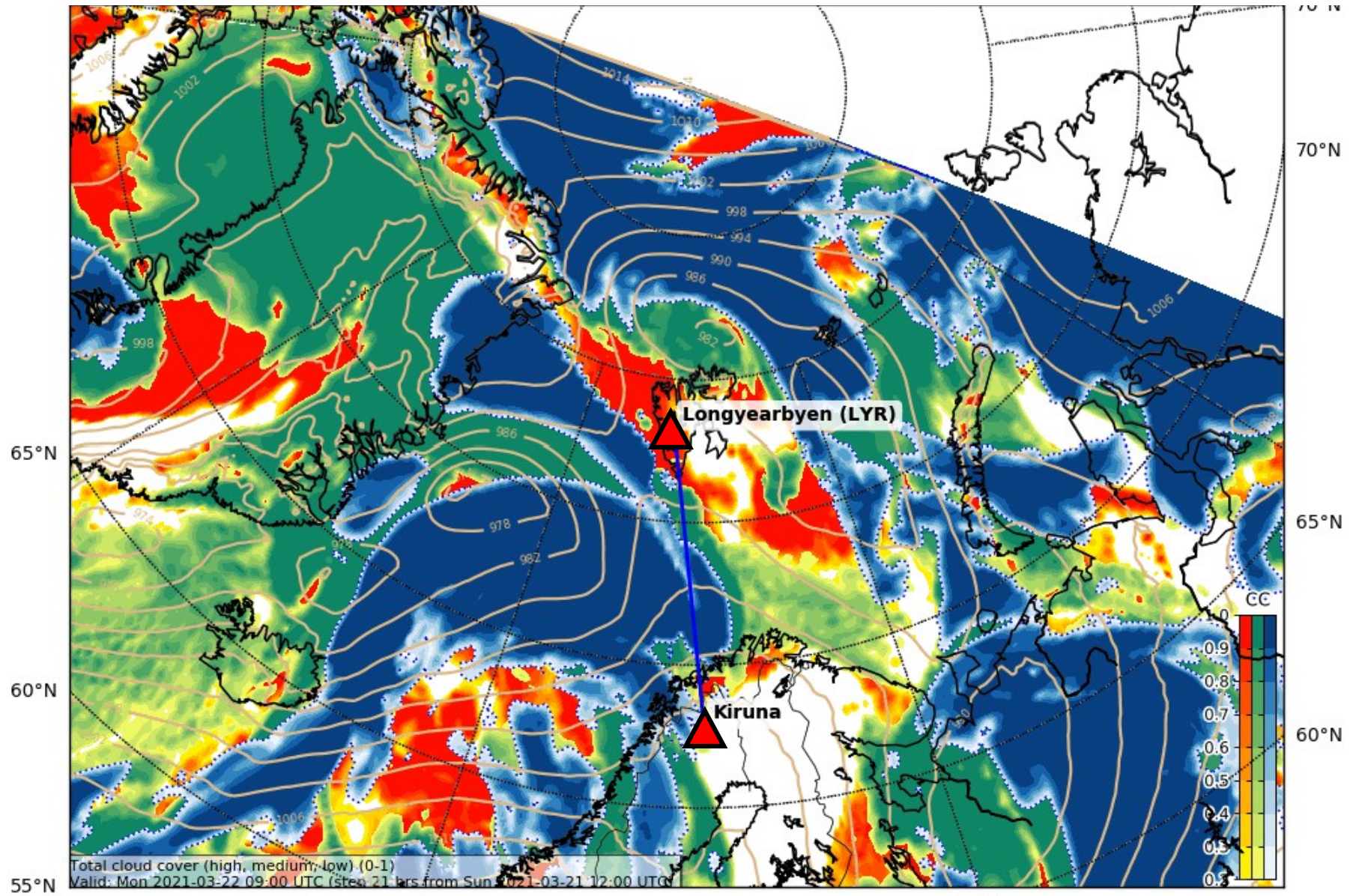
## High-level clouds



## Total clouds

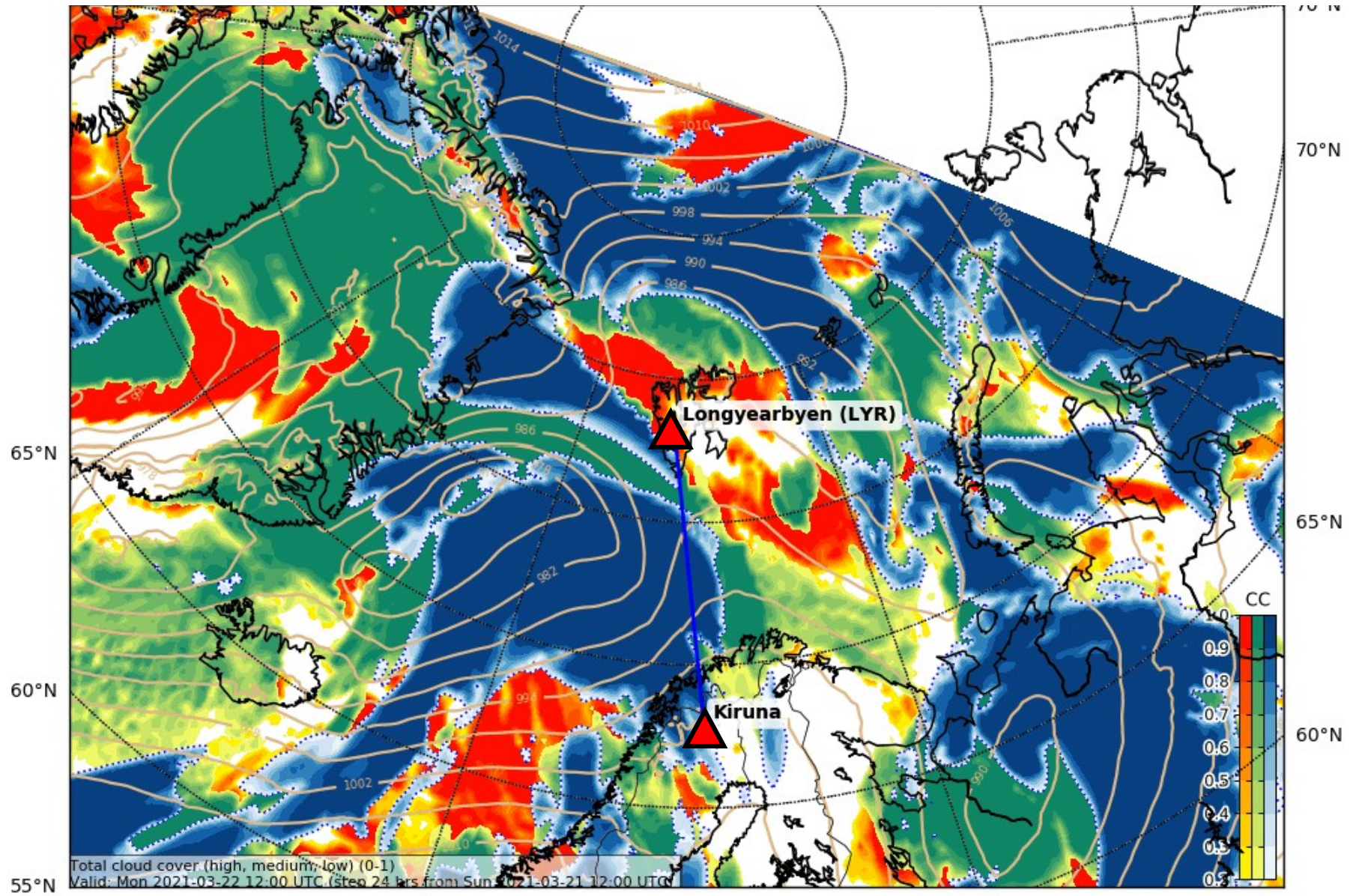


# Total cloud cover (Mon, 22.03. 09 UTC, ECMWF)

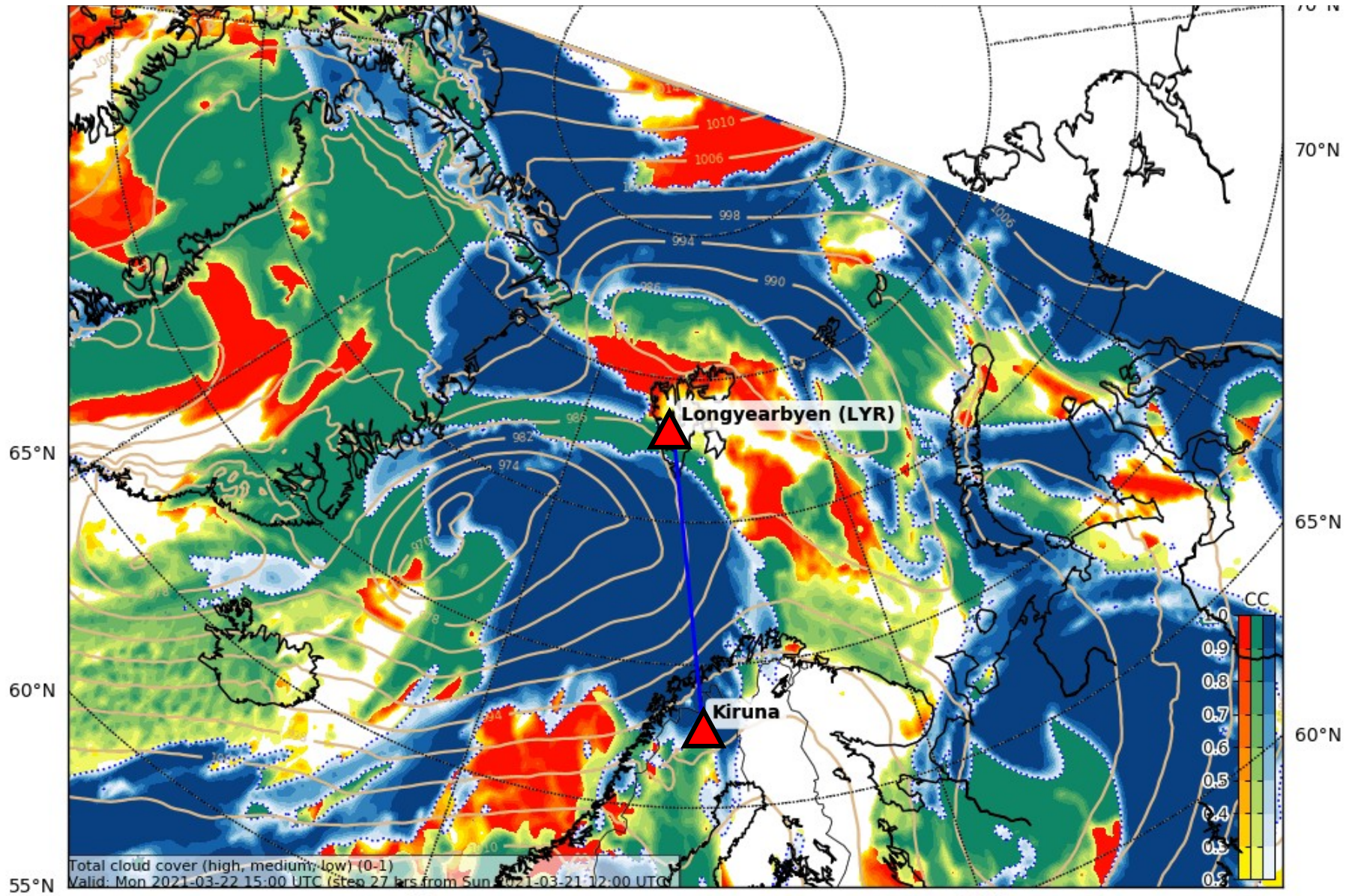




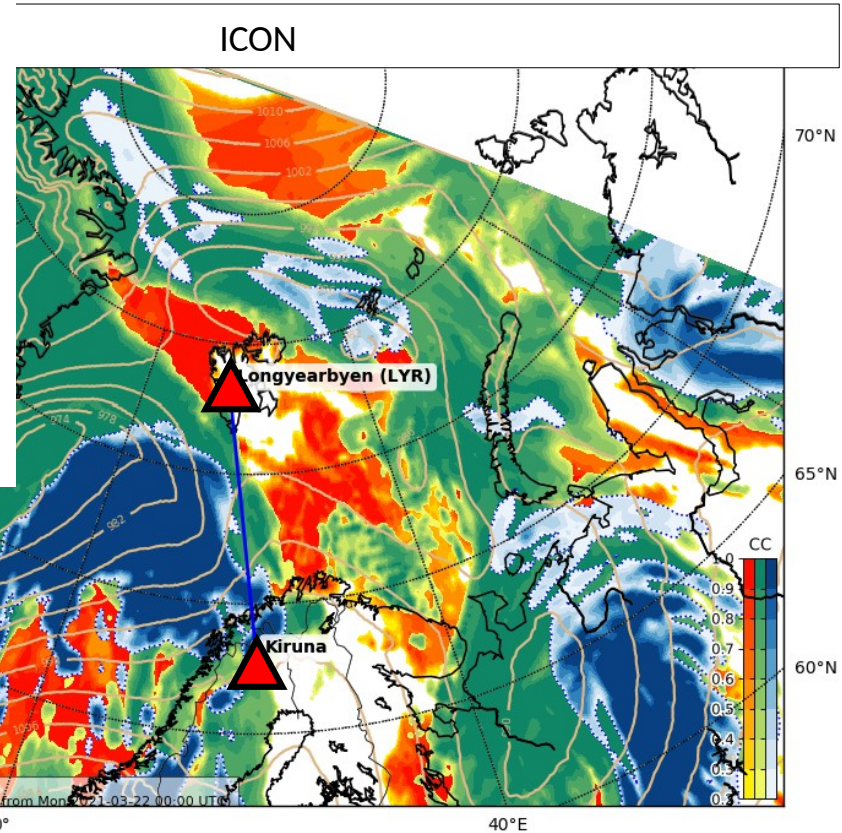
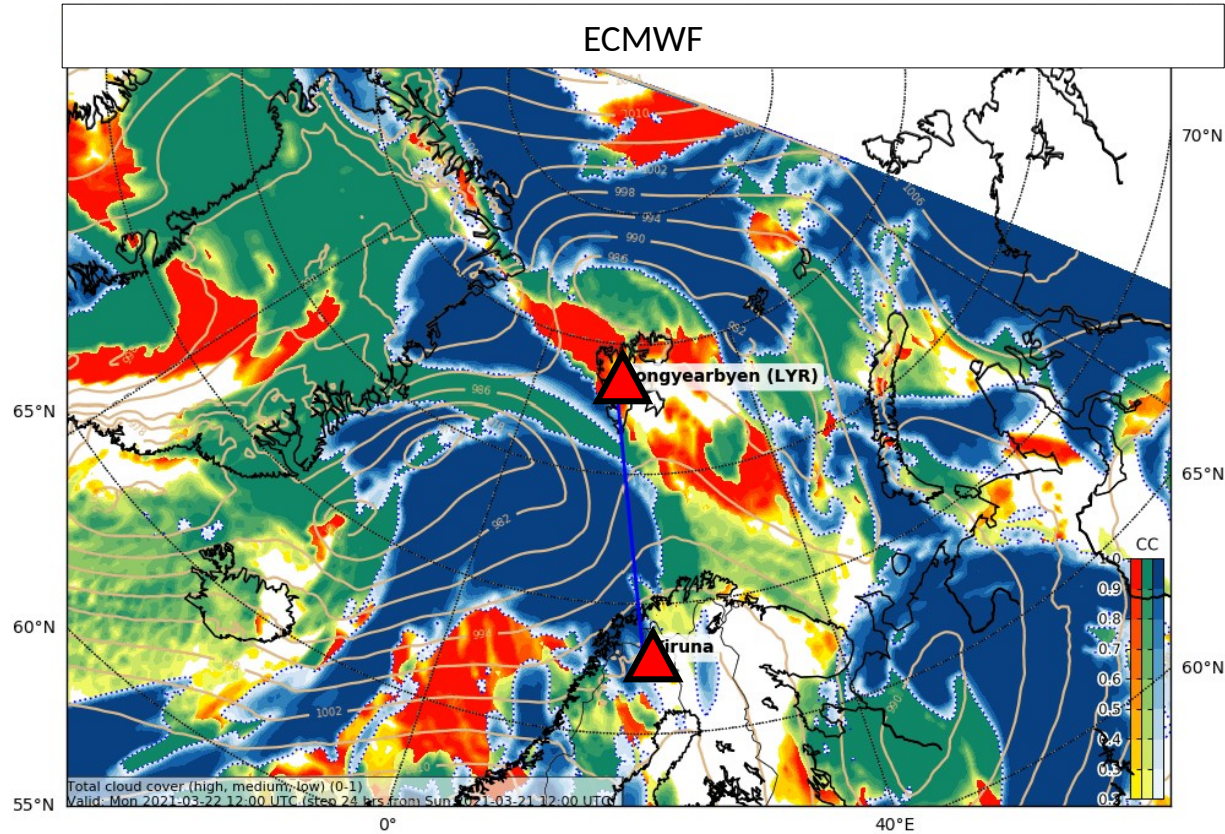
# Total cloud cover (Mon, 22.03. 12 UTC, ECMWF)



# Total cloud cover (Mon, 22.03. 15 UTC, ECMWF)

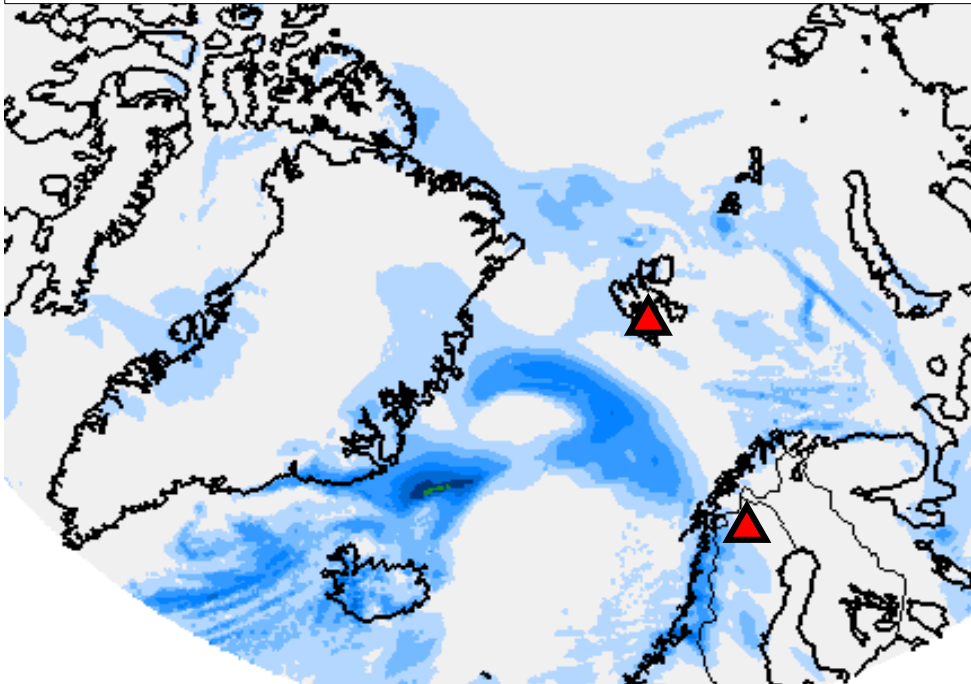


# Total cloud cover - ECMWF vs. ICON (Mon, 22.03. 12 UTC)

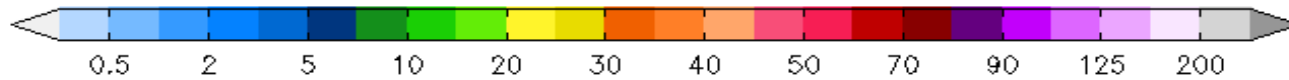
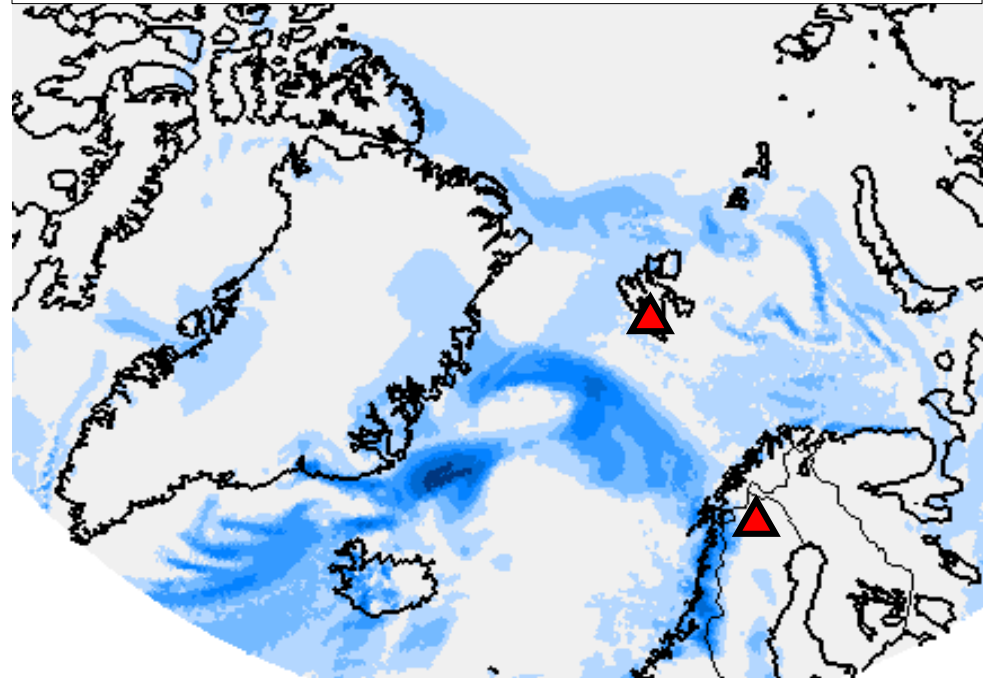


### 3h - Surface precipitation (mm) (Mon, 21.03. 12 UTC)

ECMWF



ICON

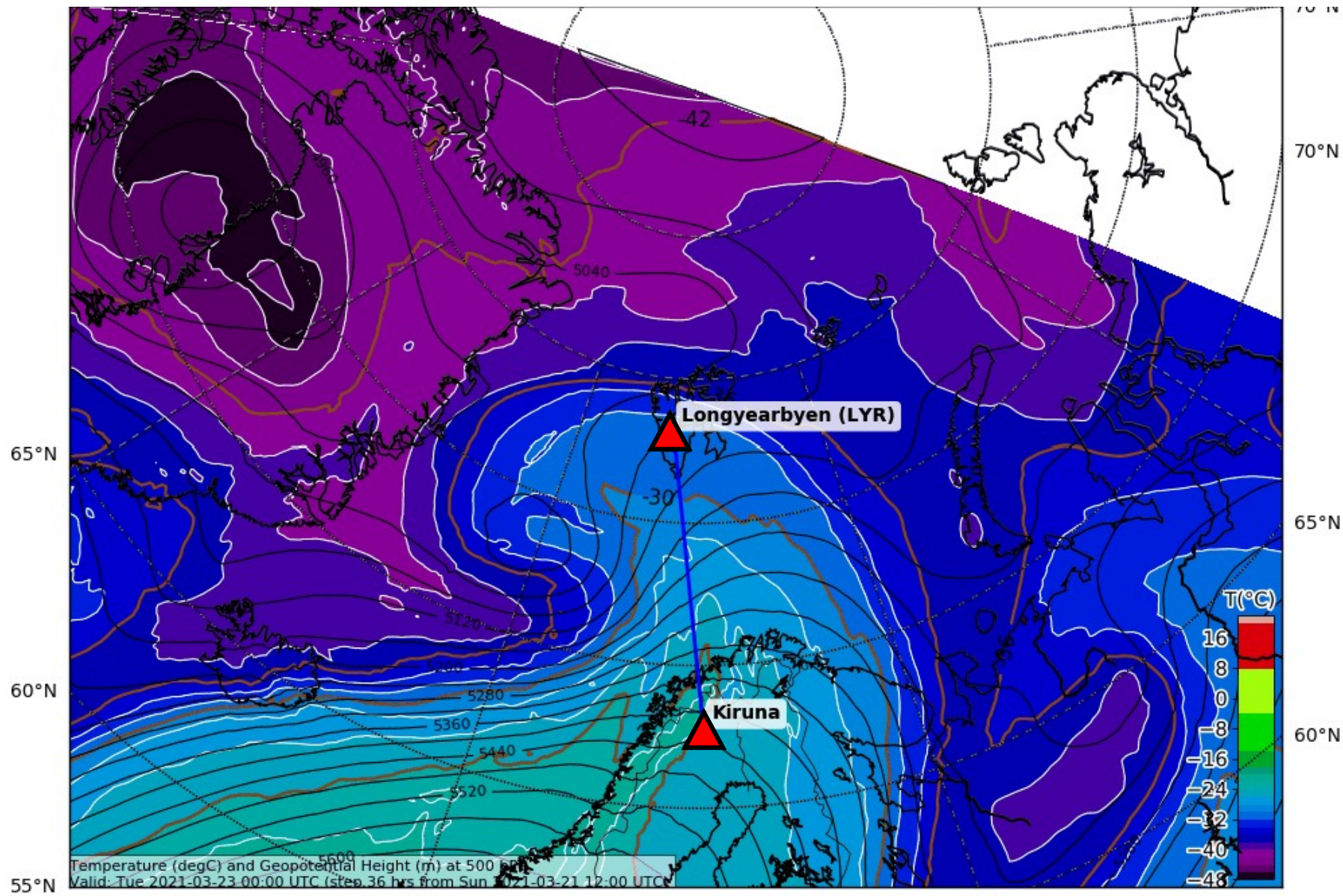


## Summary: Mon, 22.03.2021

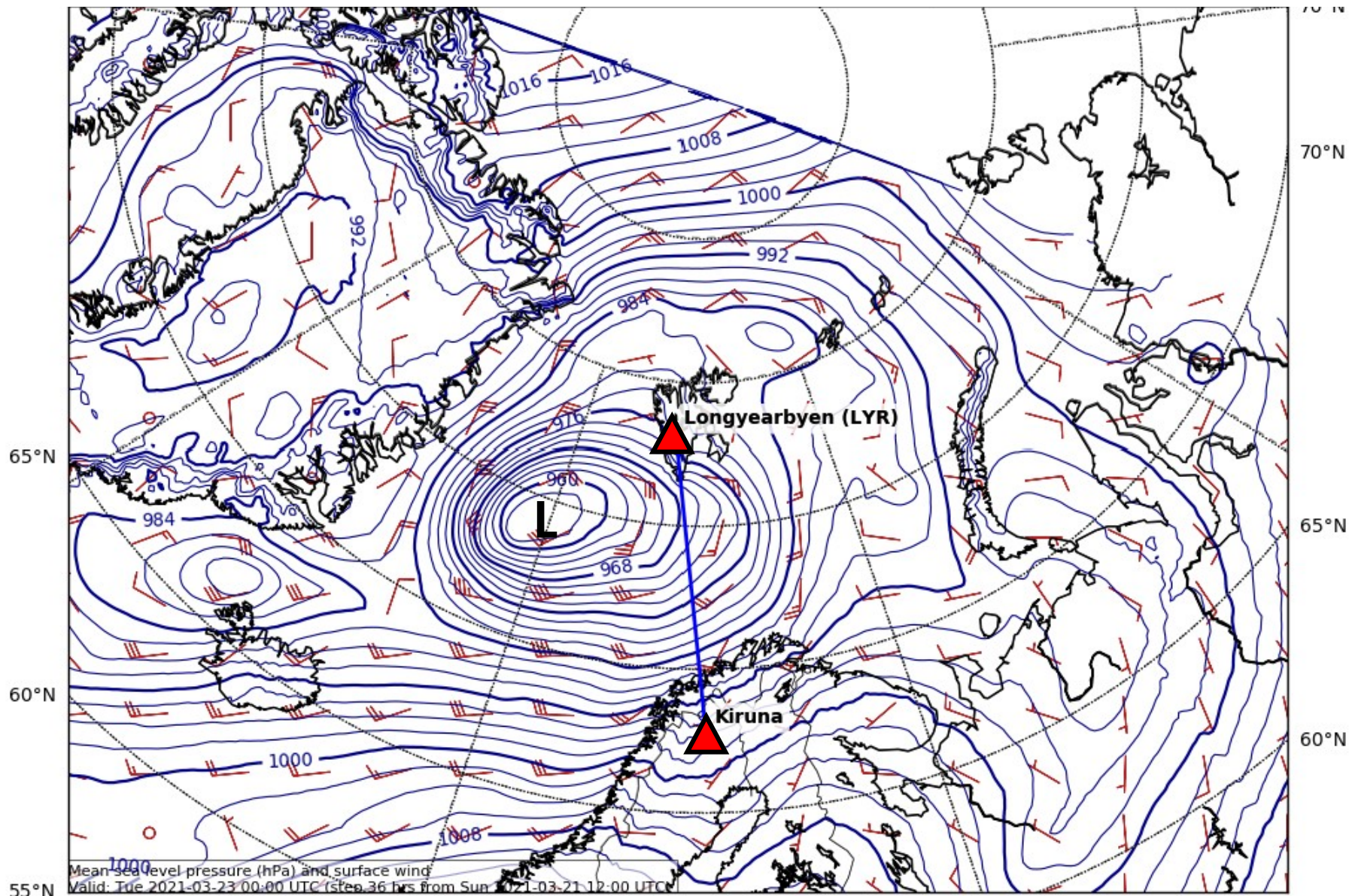
- LYR and Kiruna are situated at the rear side of a trough and are within a northwesterly flow that advects cold air masses into Fram Strait
- Low-level clouds and slight precipitation west of Svalbard associated with the weak cold air outbreak
- As new frontal system approaches from the west, northwesterly flow will decay and high-/mid-level clouds move towards Svalbard in the afternoon

Tuesday, 23 March 2021

# 500 hPa: Temperature (°C) & Geopotential (gpdm) (Tue, 23.03. 00 UTC, ECMWF)



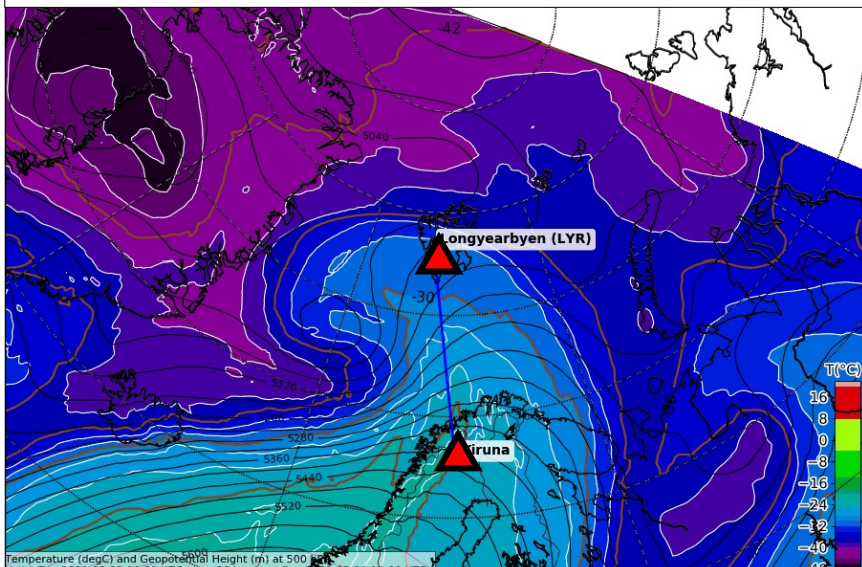
# Mean sea level pressure (hPa) and surface wind (Tue, 23.03. 00 UTC, ECMWF)



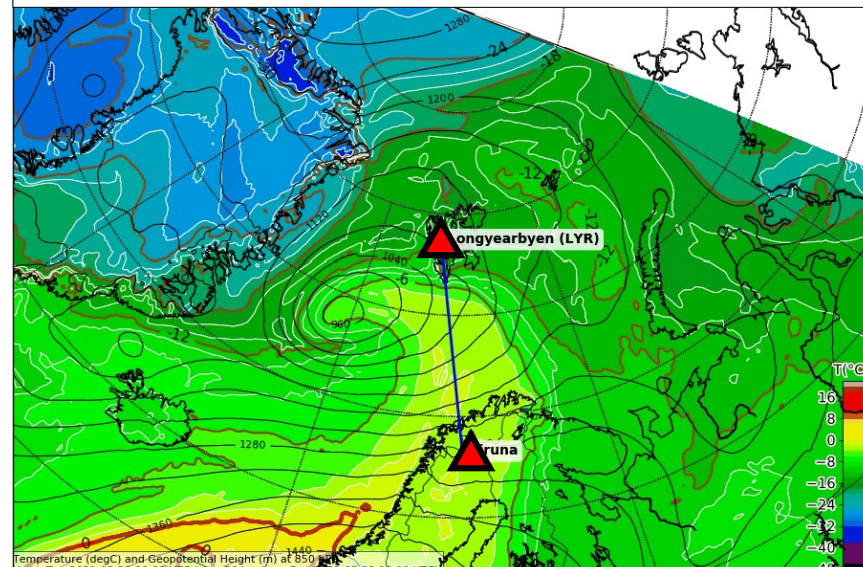


# General weather situation (Tue, 23.03 00 UTC, ECMWF)

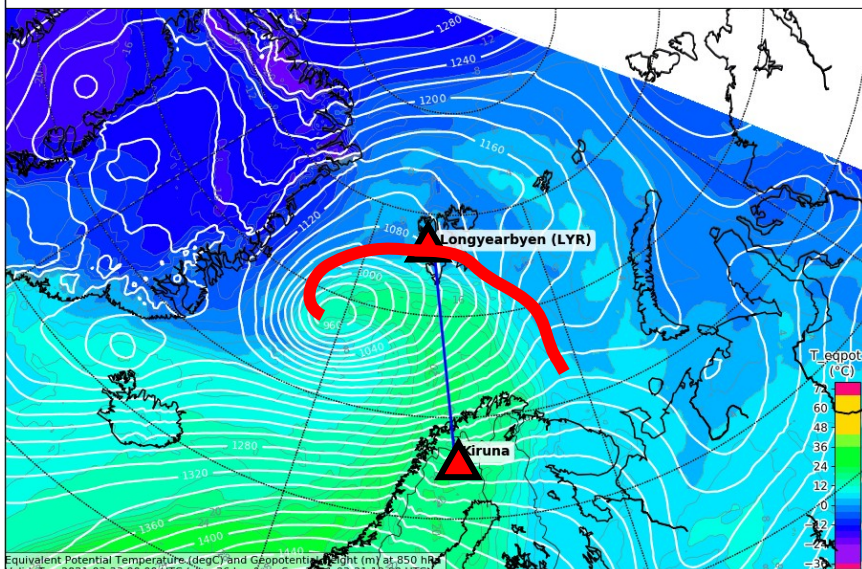
## 500 hPa: Temperature & Geopotential



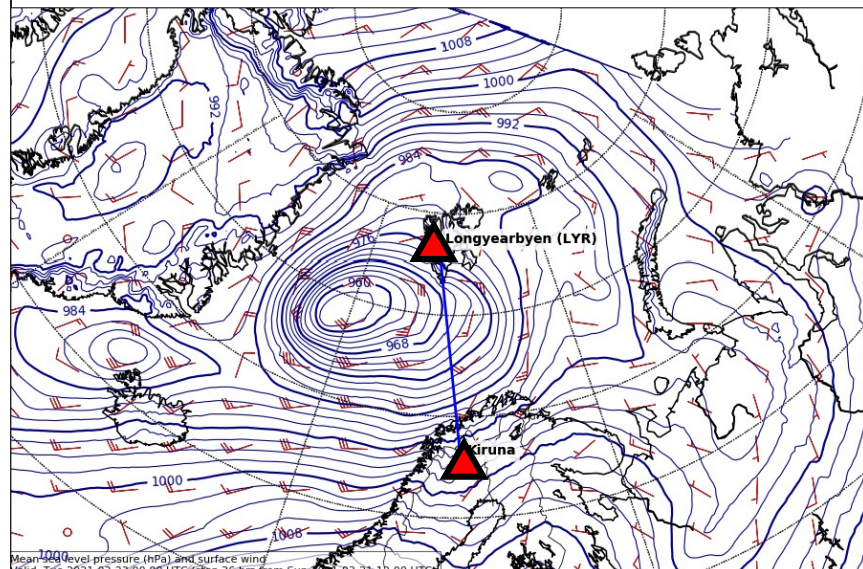
## 850 hPa: Temperature & Geopotential



## 850 hPa: Equi. Pot. Temperature & Geopotential

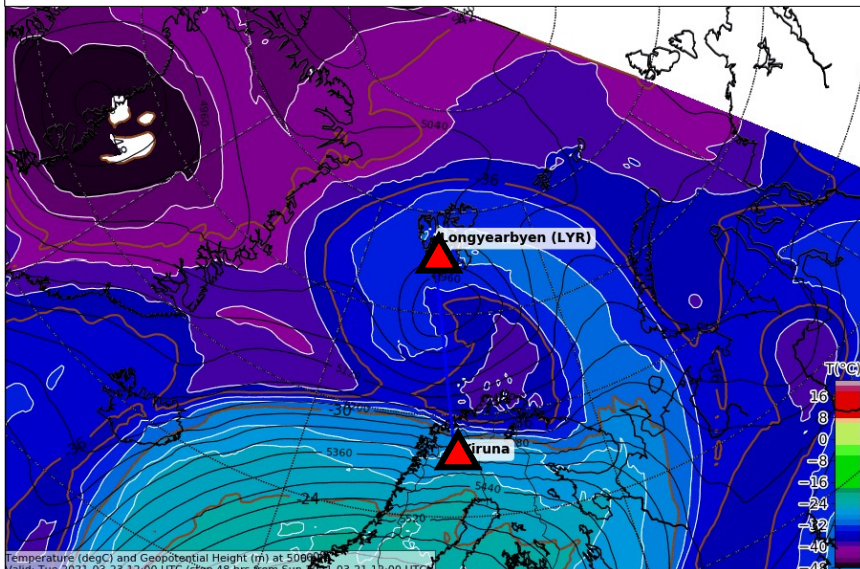


## Mean sea level pressure and surface wind

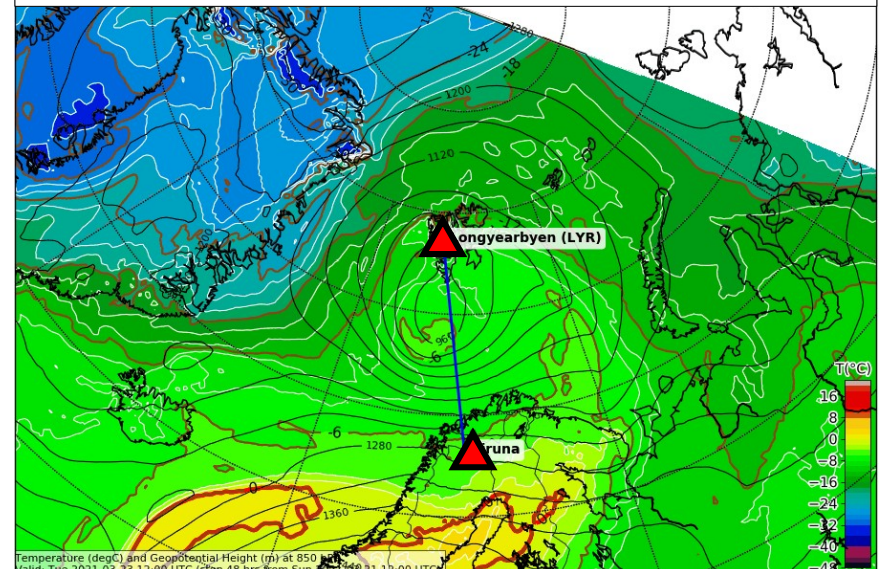


# General weather situation (Tue, 23.03 12 UTC, ECMWF)

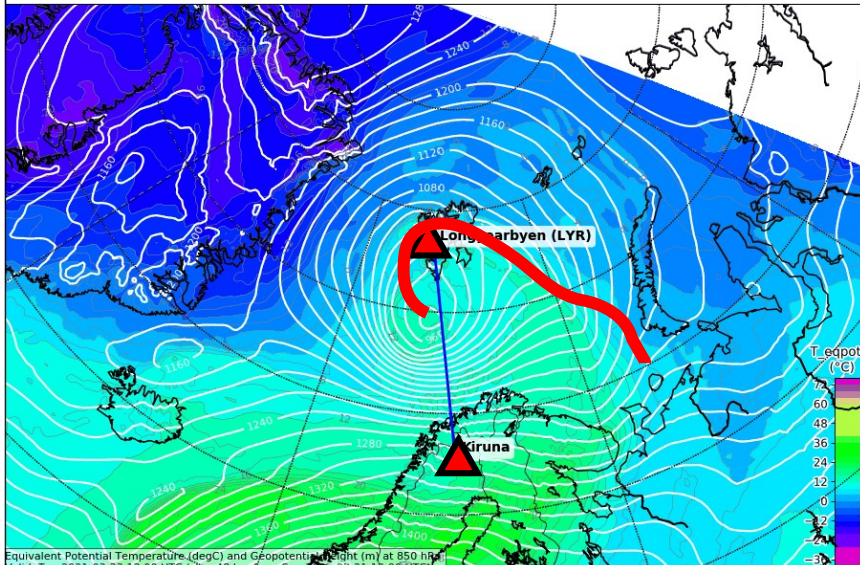
## 500 hPa: Temperature & Geopotential



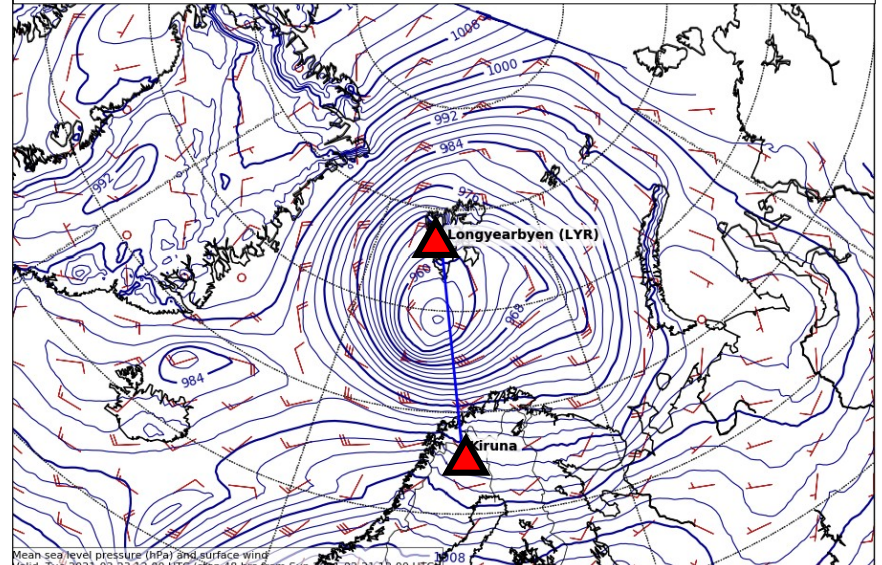
## 850 hPa: Temperature & Geopotential



## 850 hPa: Equi. Pot. Temperature & Geopotential

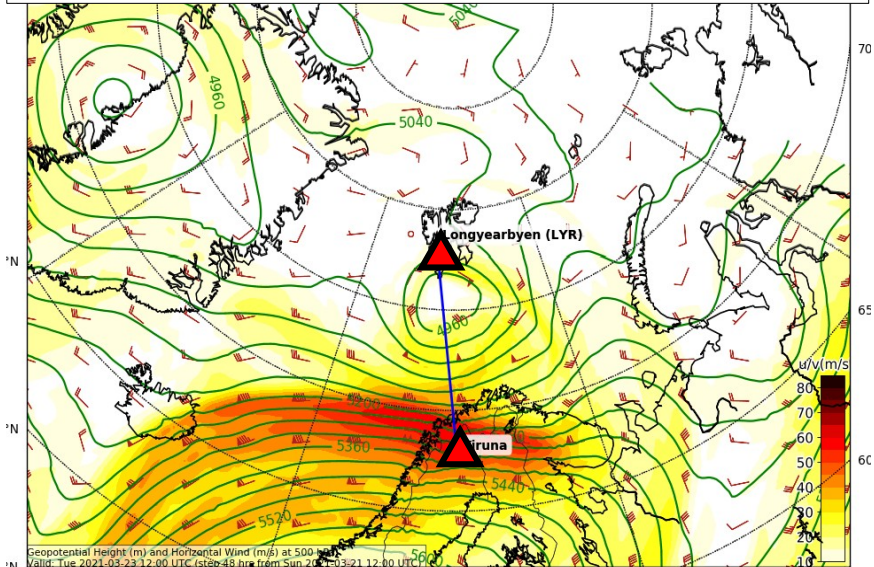


## Mean sea level pressure and surface wind



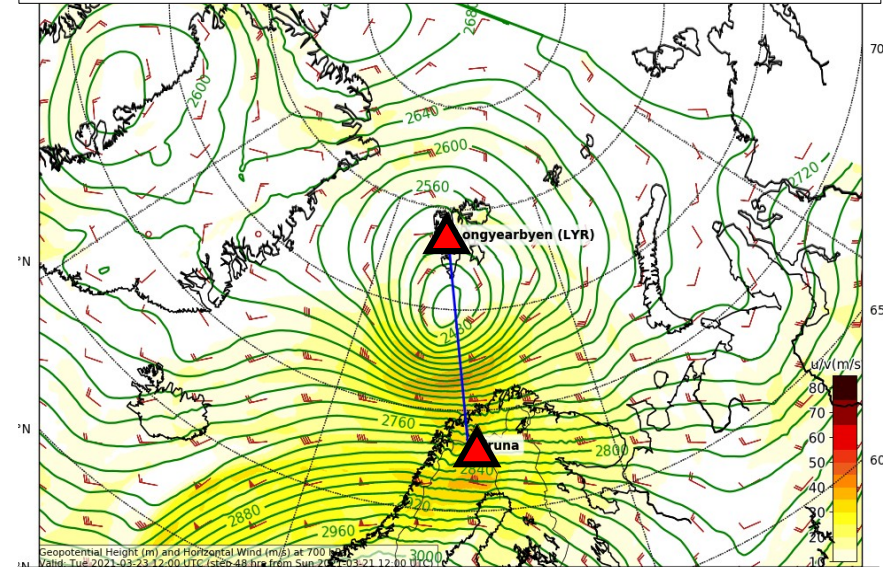
# Winds (Tue, 23.03 12 UTC, ECMWF)

## 500 hPa: Wind & Geopotential



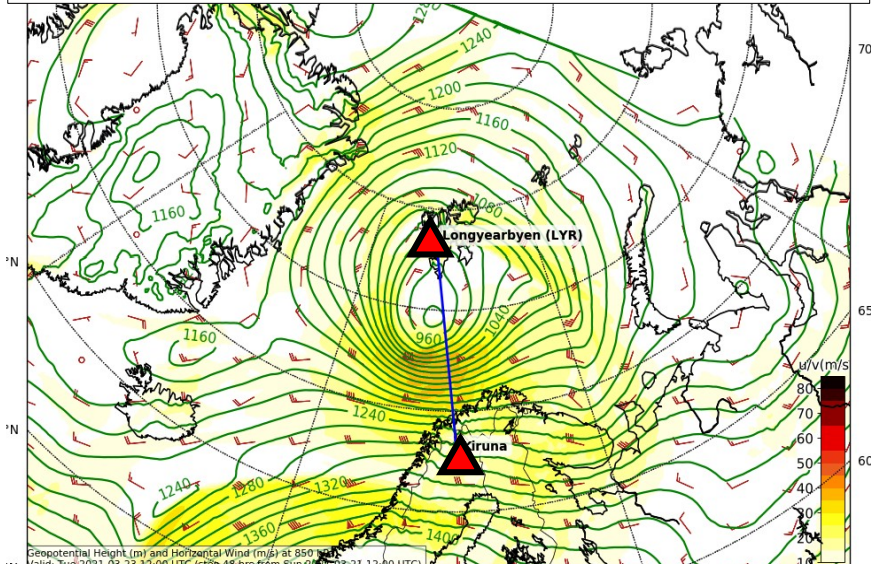
Geopotential Height (m) and Horizontal Wind (m/s) at 500 hPa  
Valid: Tue-2021-03-23 12:00 UTC (step: 48 hrs from Sun-2021-03-21 12:00 UTC)

## 700 hPa: Wind & Geopotential



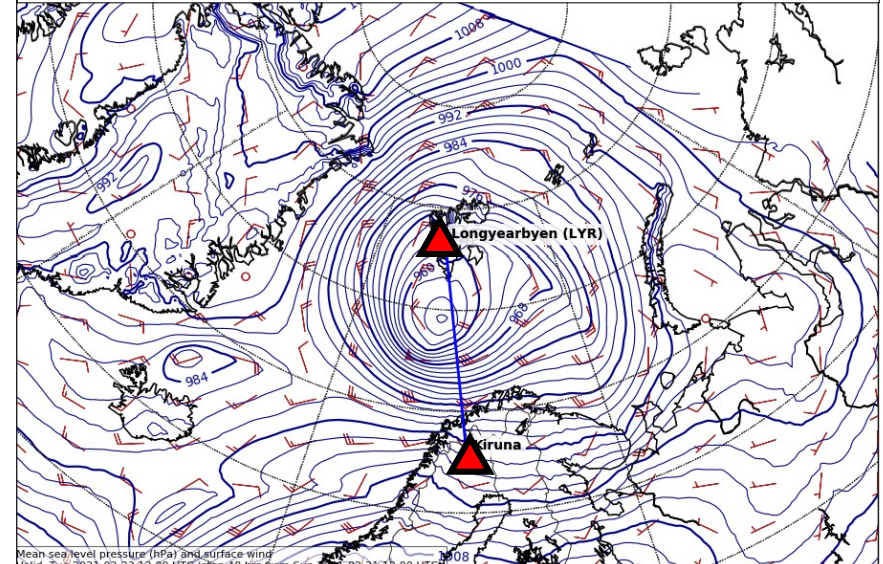
Geopotential Height (m) and Horizontal Wind (m/s) at 700 hPa  
Valid: Tue-2021-03-23 12:00 UTC (step: 48 hrs from Sun-2021-03-21 12:00 UTC)

## 850 hPa: Wind & Geopotential



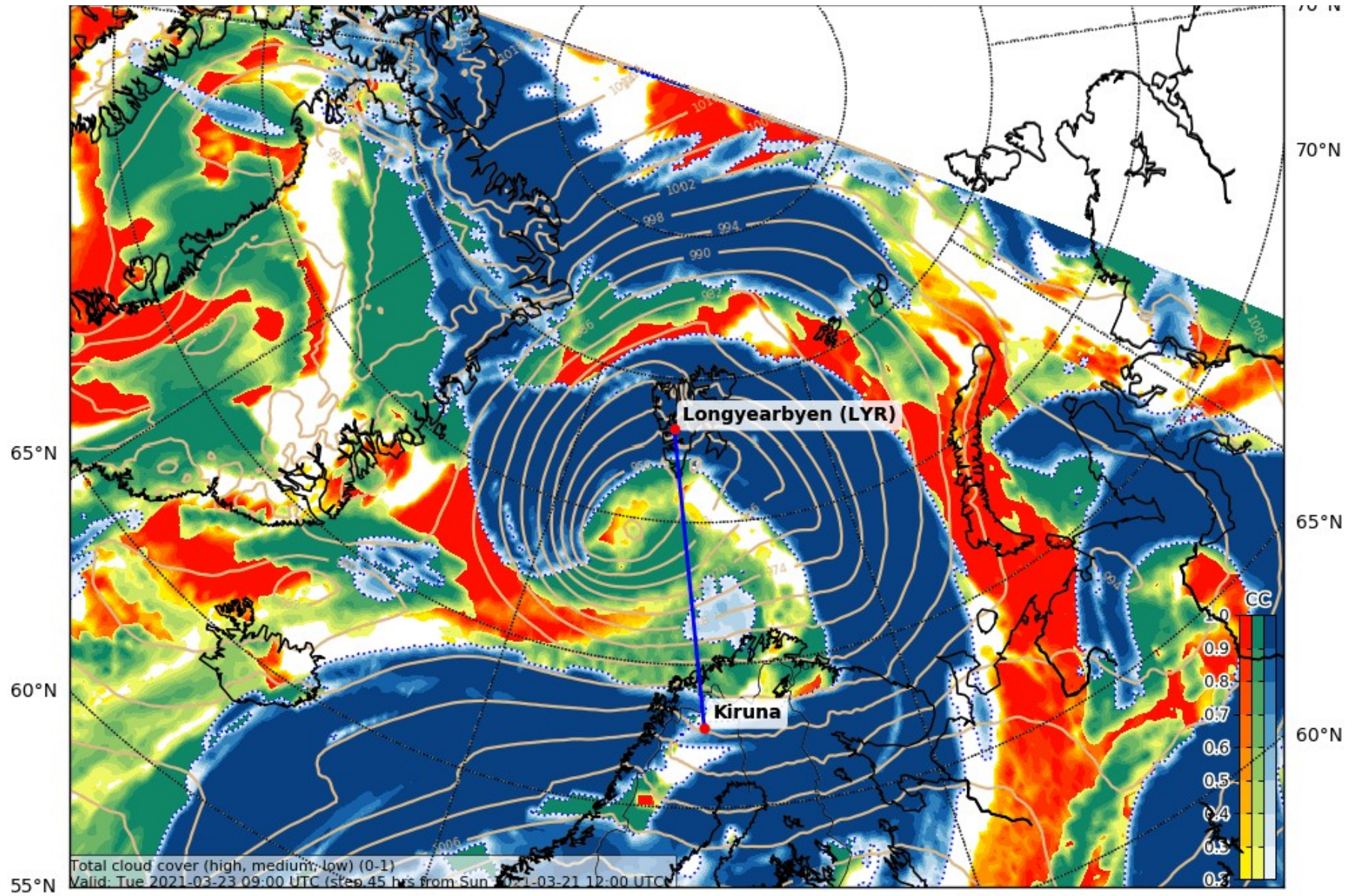
Geopotential Height (m) and Horizontal Wind (m/s) at 850 hPa  
Valid: Tue-2021-03-23 12:00 UTC (step: 48 hrs from Sun-2021-03-21 12:00 UTC)

## Mean sea level pressure and surface wind

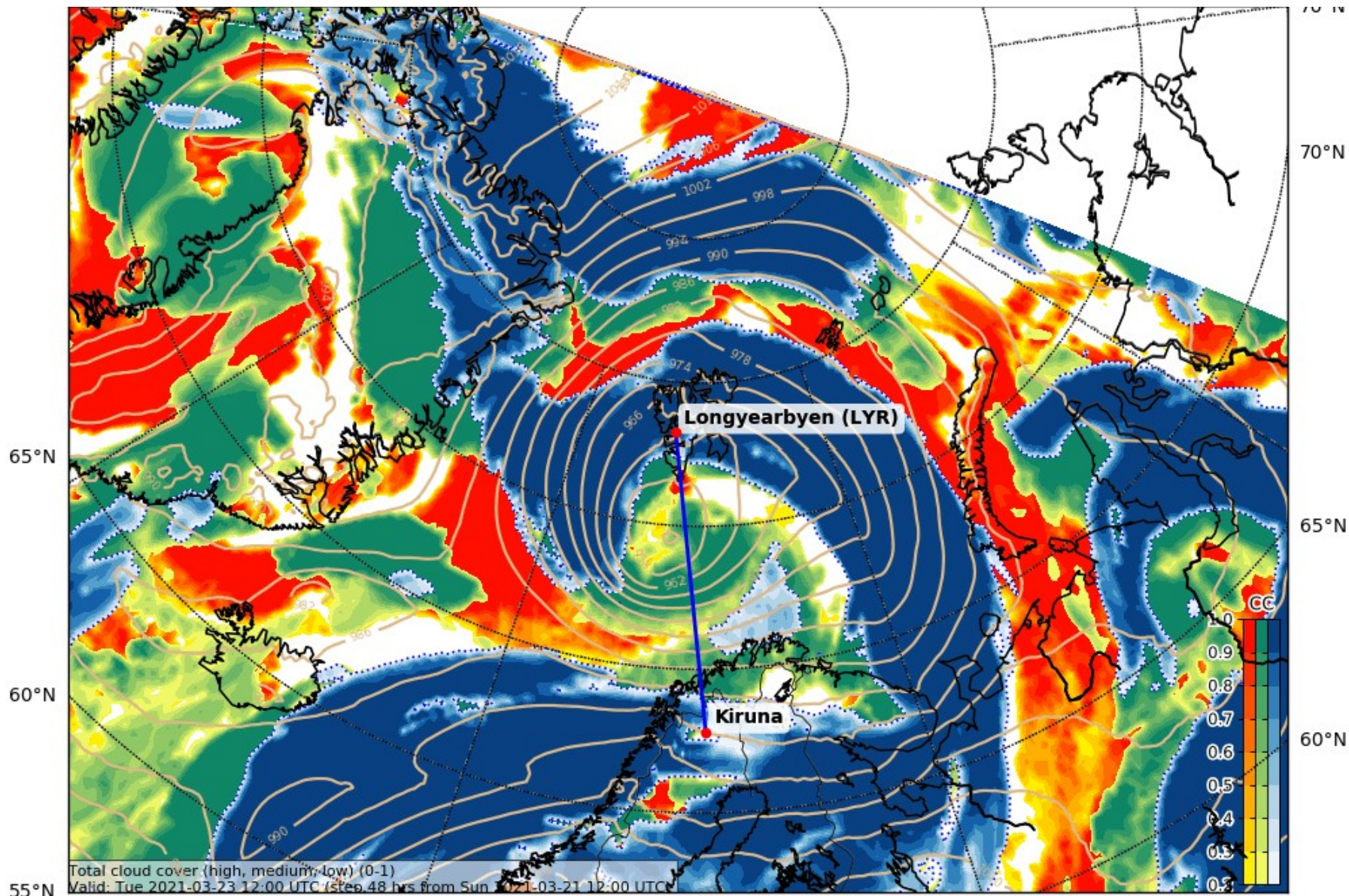


Mean sea level pressure (hPa) and surface wind  
Valid: Tue-2021-03-23 12:00 UTC (step: 48 hrs from Sun-2021-03-21 12:00 UTC)

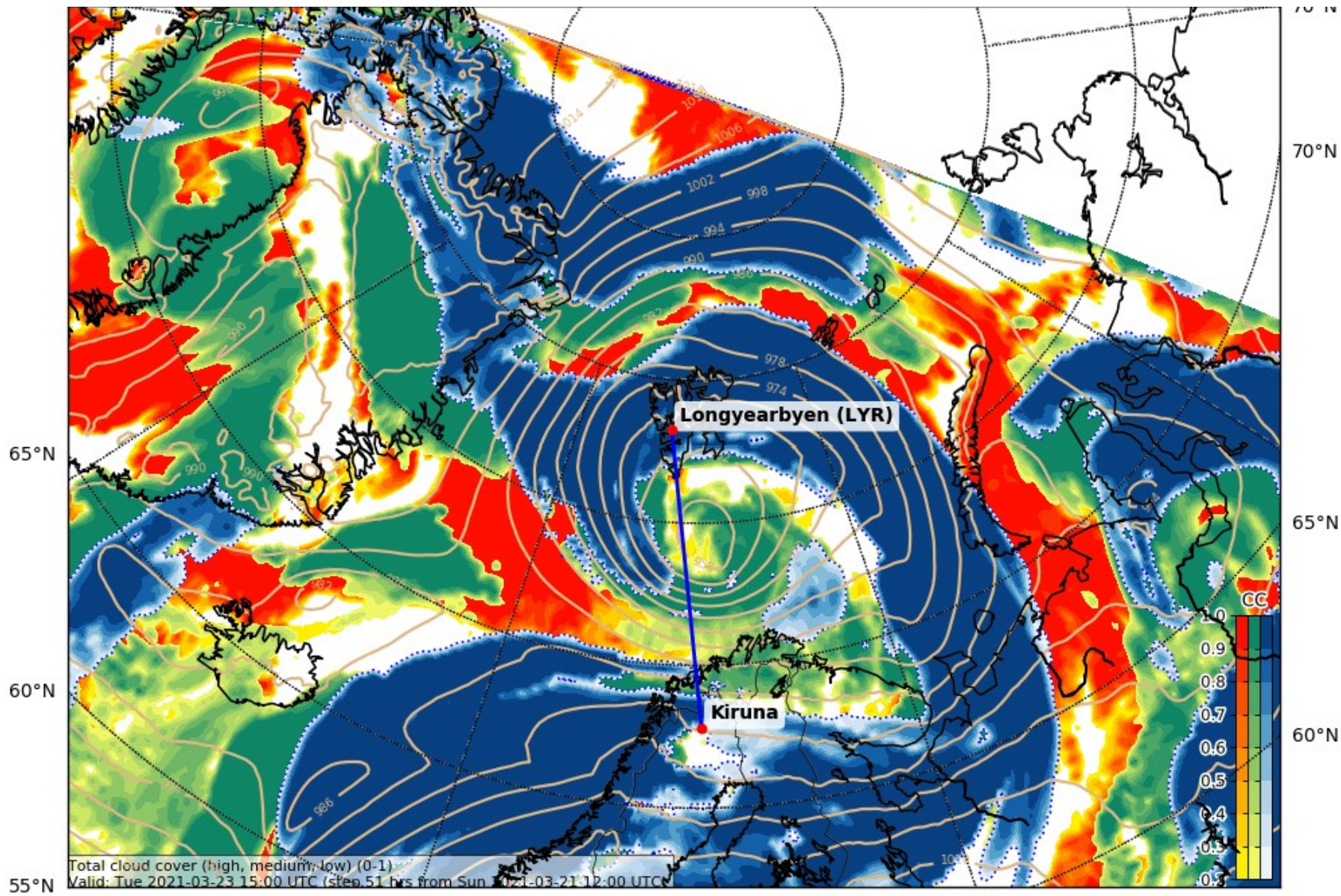
# Total cloud cover (Tue, 23.03. 09 UTC, ECMWF)



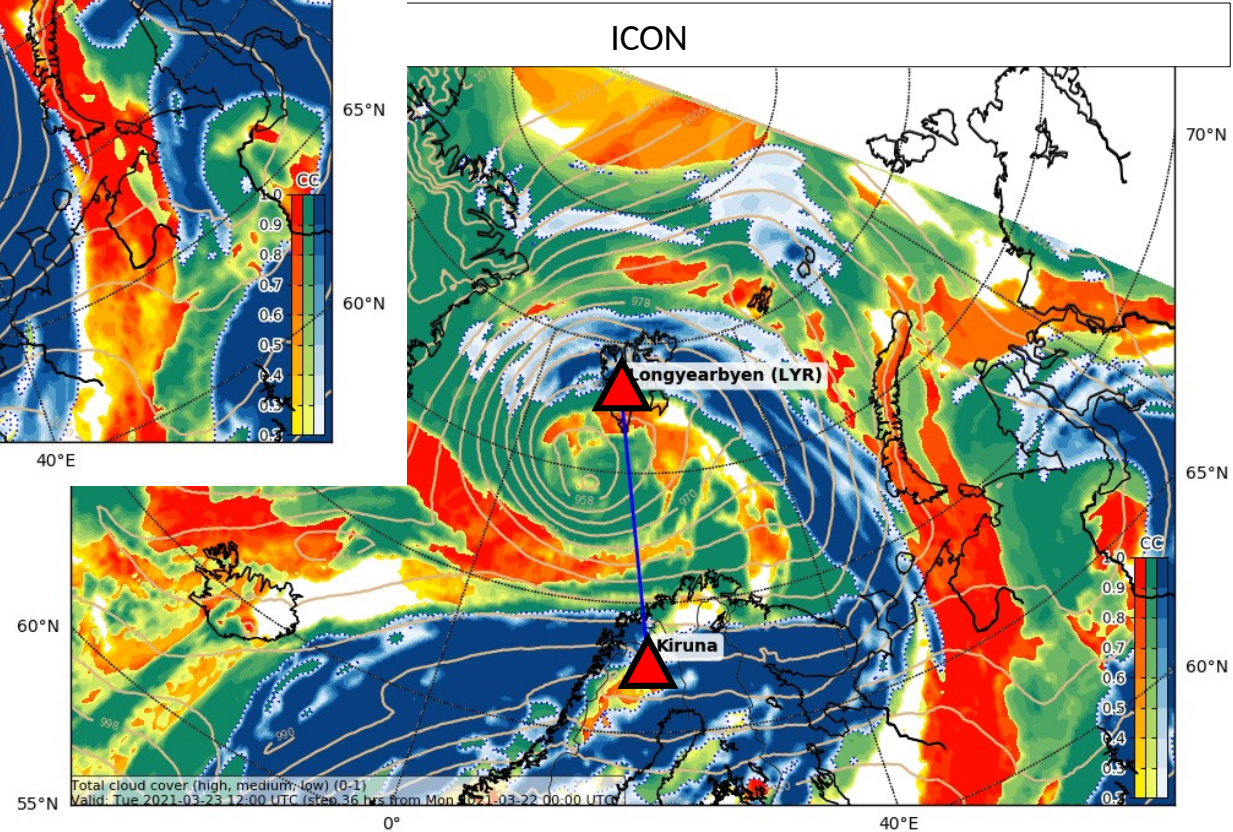
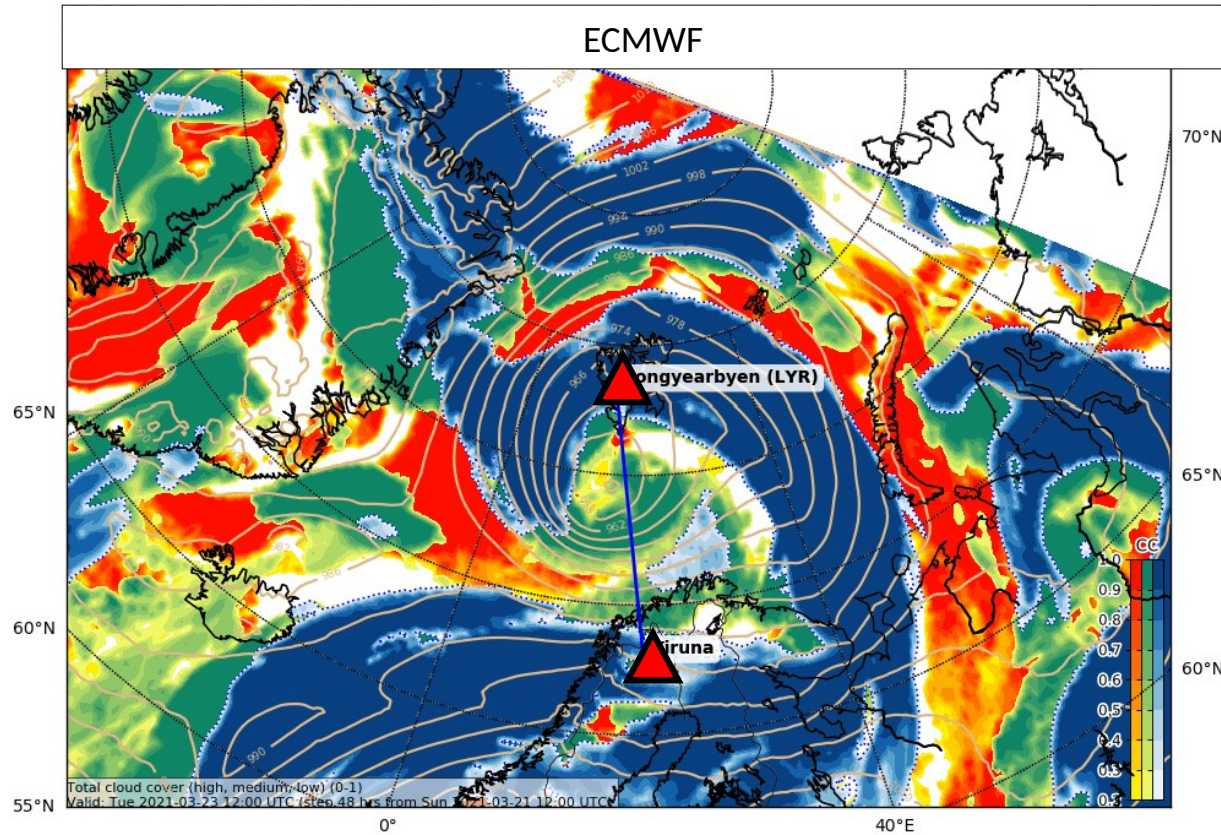
# Total cloud cover (Tue, 23.03. 12 UTC, ECMWF)



# Total cloud cover (Tue, 23.03. 13 UTC, ECMWF)

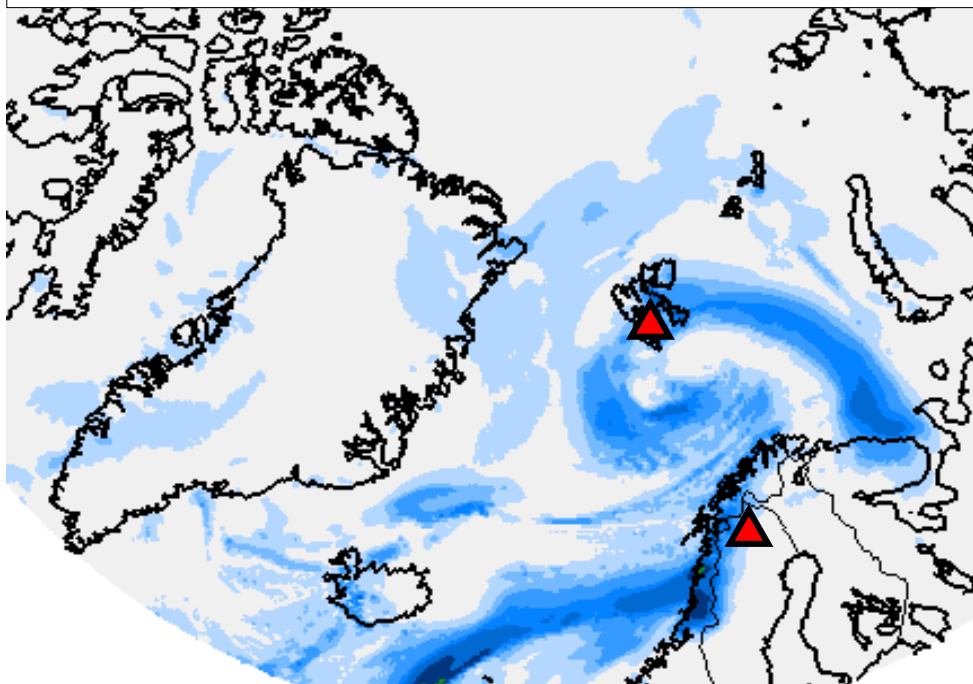


# Total cloud cover - ECMWF vs. ICON (Tue, 23.03. 12 UTC)

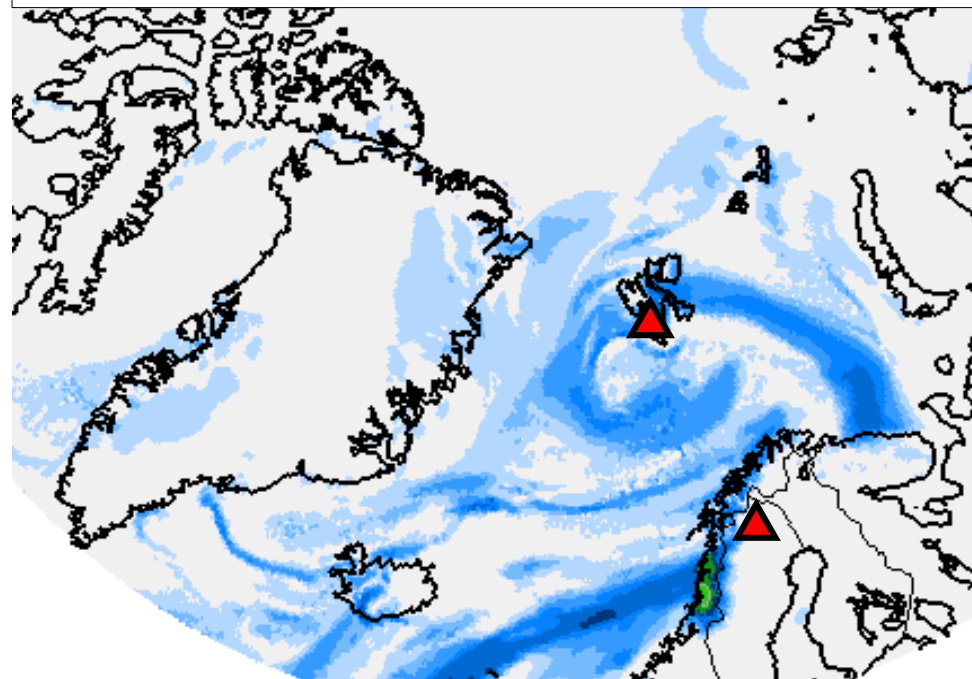


### 3h - Surface Precipitation (Tue, 23.03. 12 UTC)

ECMWF



ICON



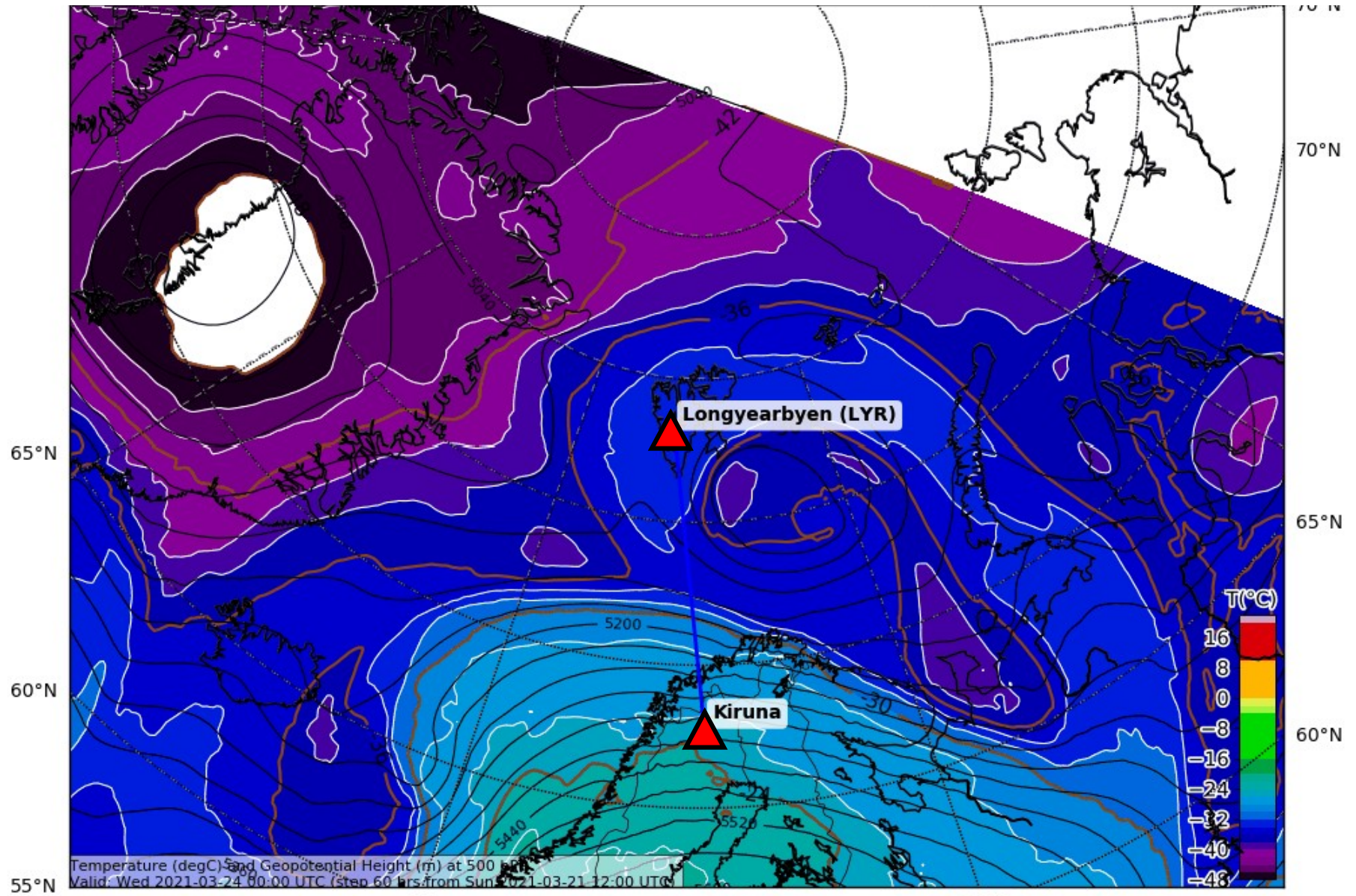


## Summary: Tue, 23.03.2021

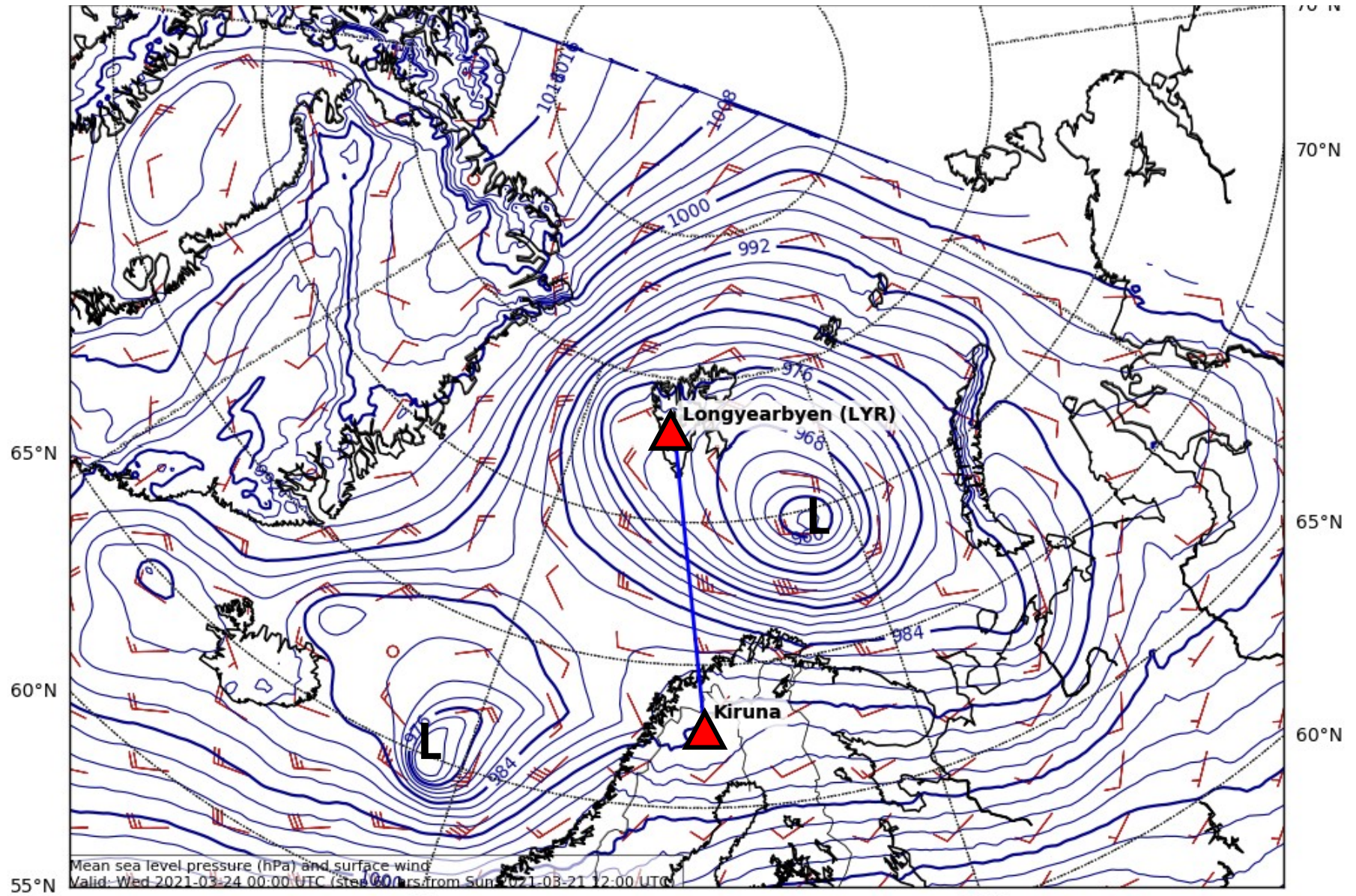
- Low pressure system passes south of Svalbard
- Passage of warm front and warm air advection into the region south of Svalbard
- Influence of warm front with high cloud cover and precipitation throughout the whole day over Svalbard
- Northerly flow will establish after the passage of the low with new cold air advection into Fram Strait

Wednesday, 24 March 2021

# 500 hPa: Temperature (°C) & Geopotential (gpm) (Wed, 24.03. 00 UTC, ECMWF)

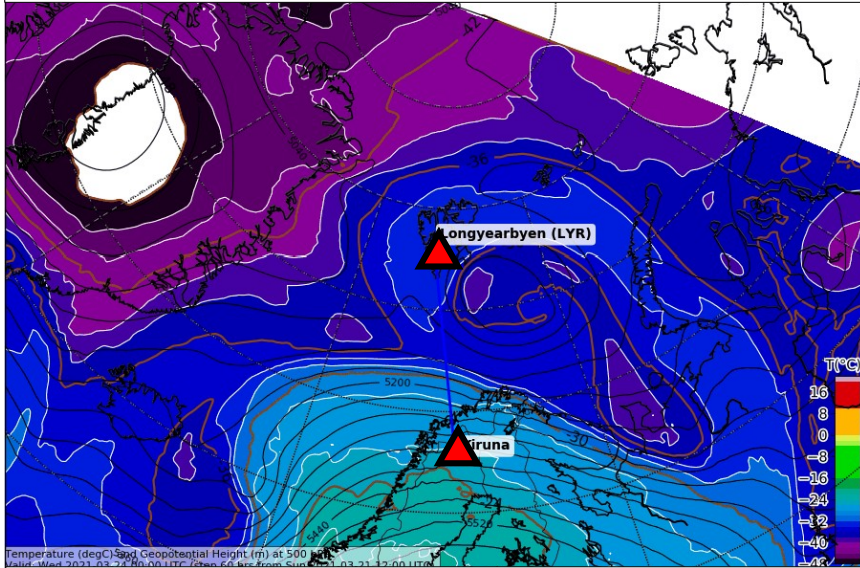


# Mean sea level pressure (hPa) and surface wind (Wed, 24.03. 00 UTC, ECMWF)

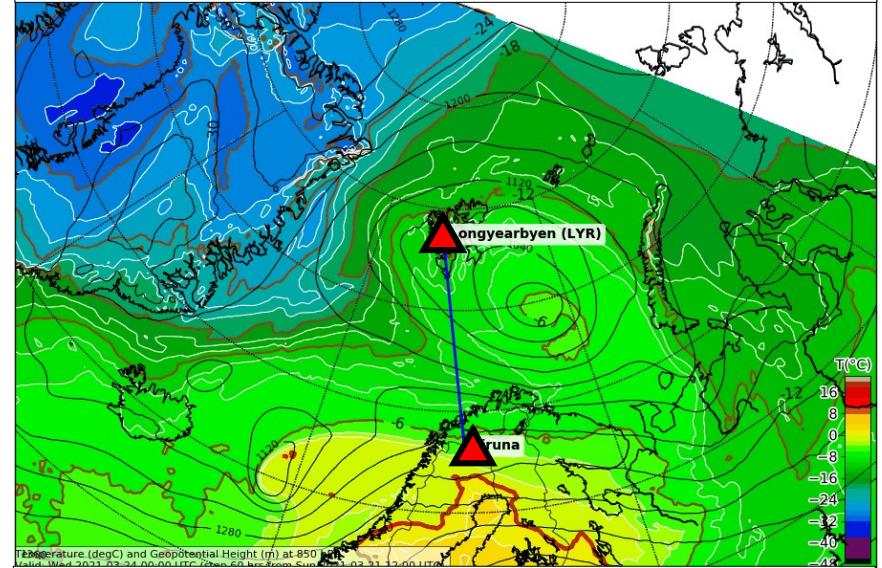


# General weather situation (Wed, 24.03 00 UTC, ECMWF)

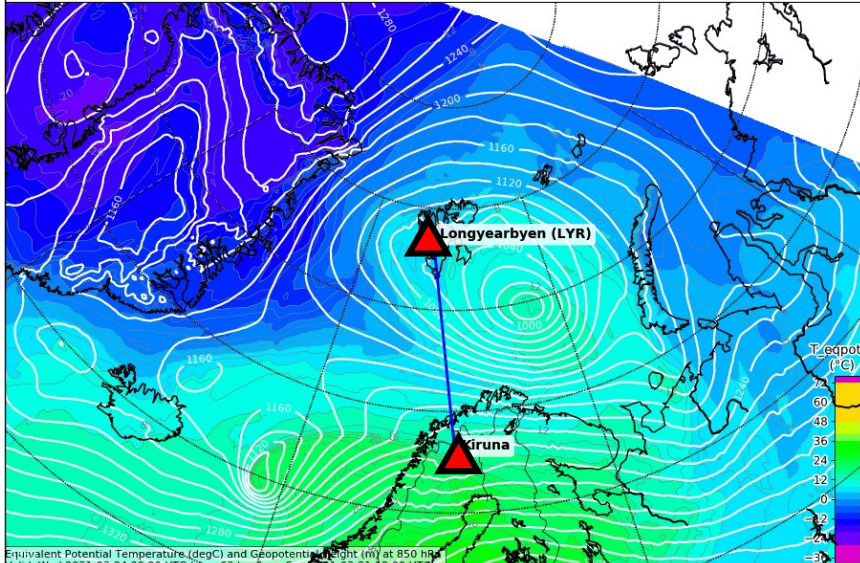
## 500 hPa: Temperature & Geopotential



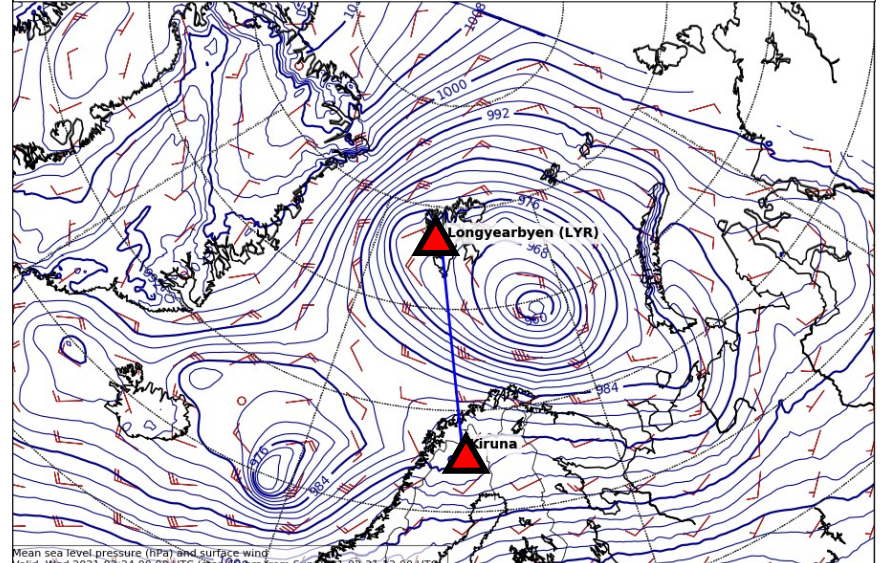
## 850 hPa: Temperature & Geopotential



## 850 hPa: Equi. Pot. Temperature & Geopotential

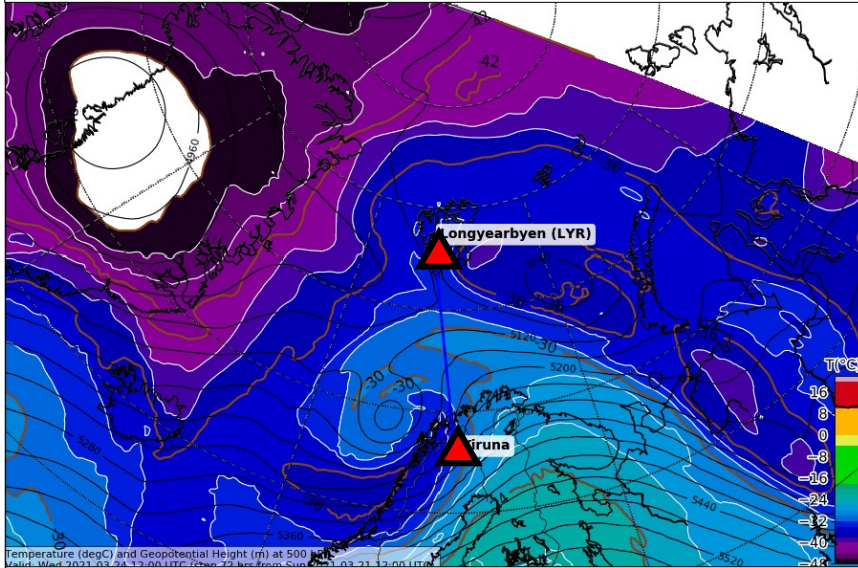


## Mean sea level pressure and surface wind

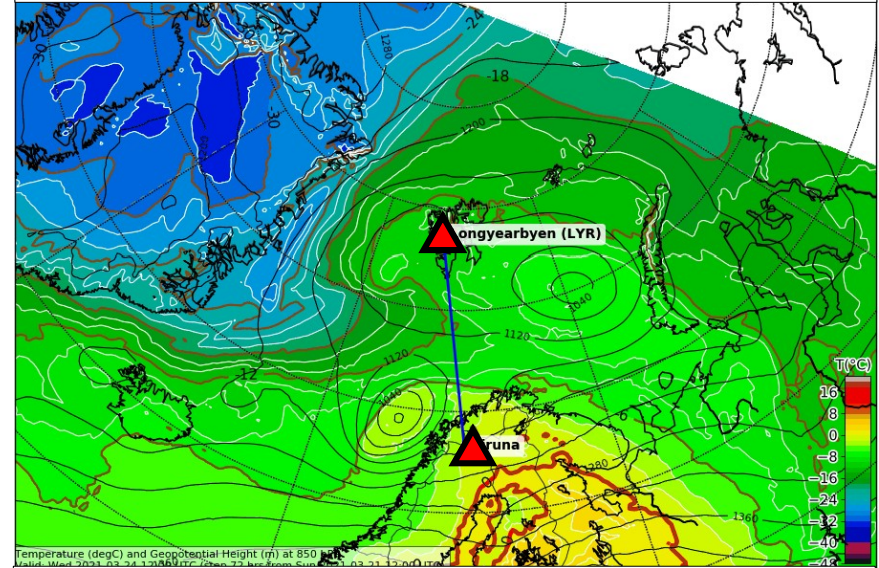


# General weather situation (Wed, 24.03 12 UTC, ECMWF)

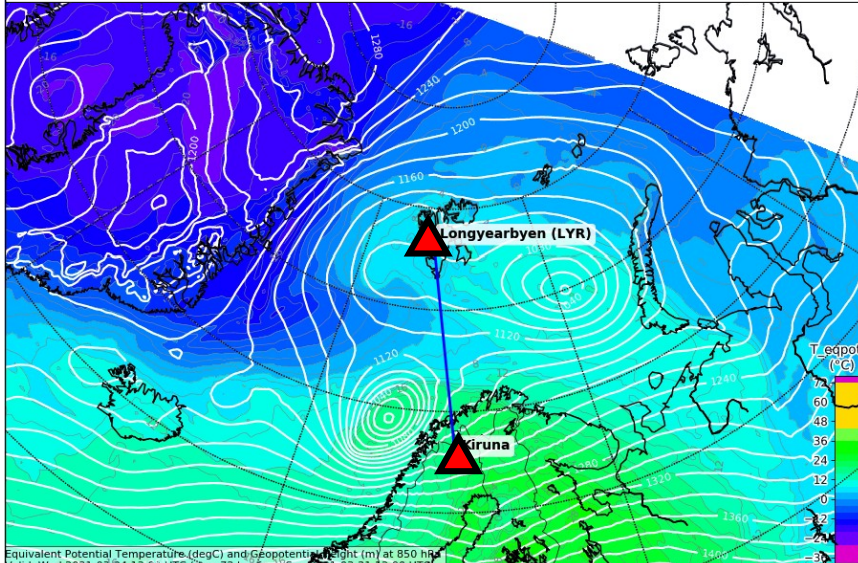
## 500 hPa: Temperature & Geopotential



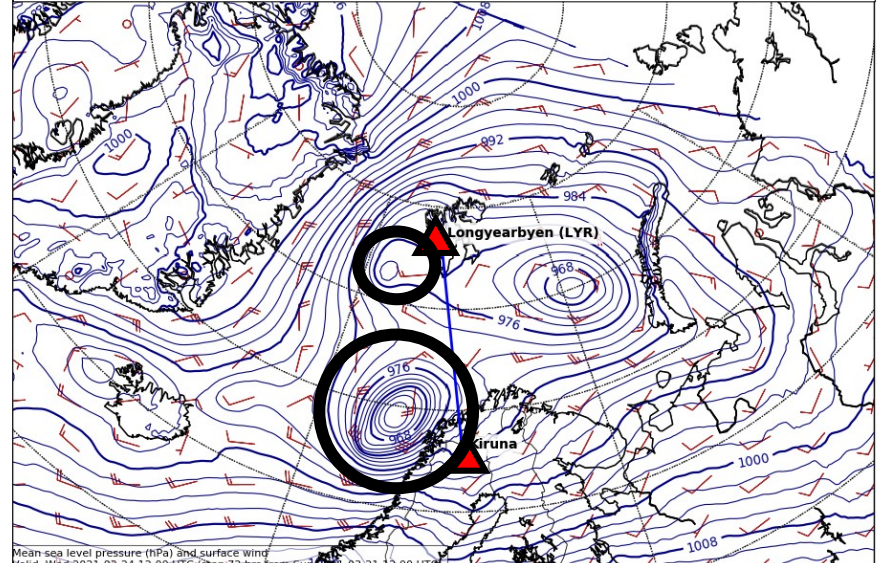
## 850 hPa: Temperature & Geopotential



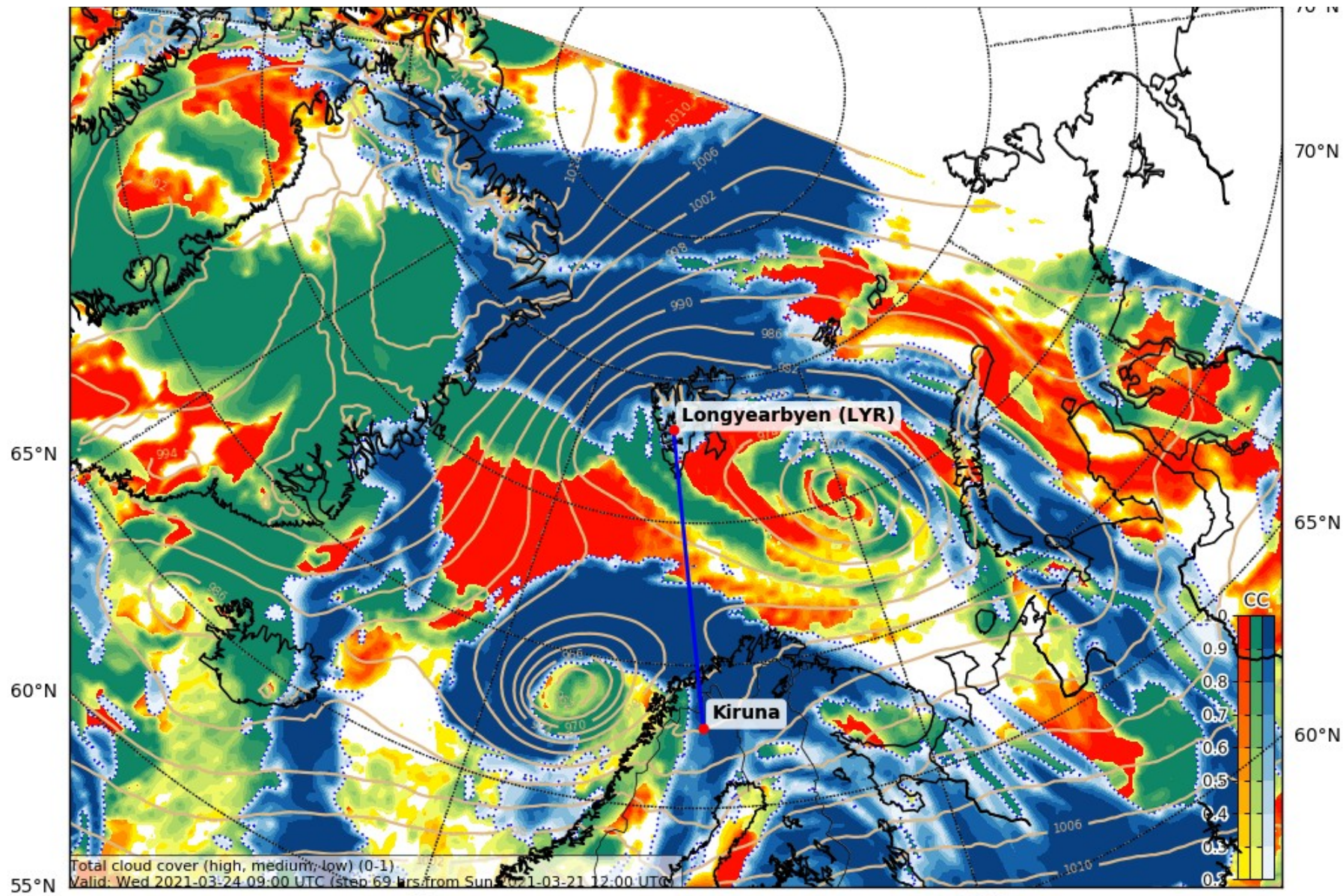
## 850 hPa: Equi. Pot. Temperature & Geopotential



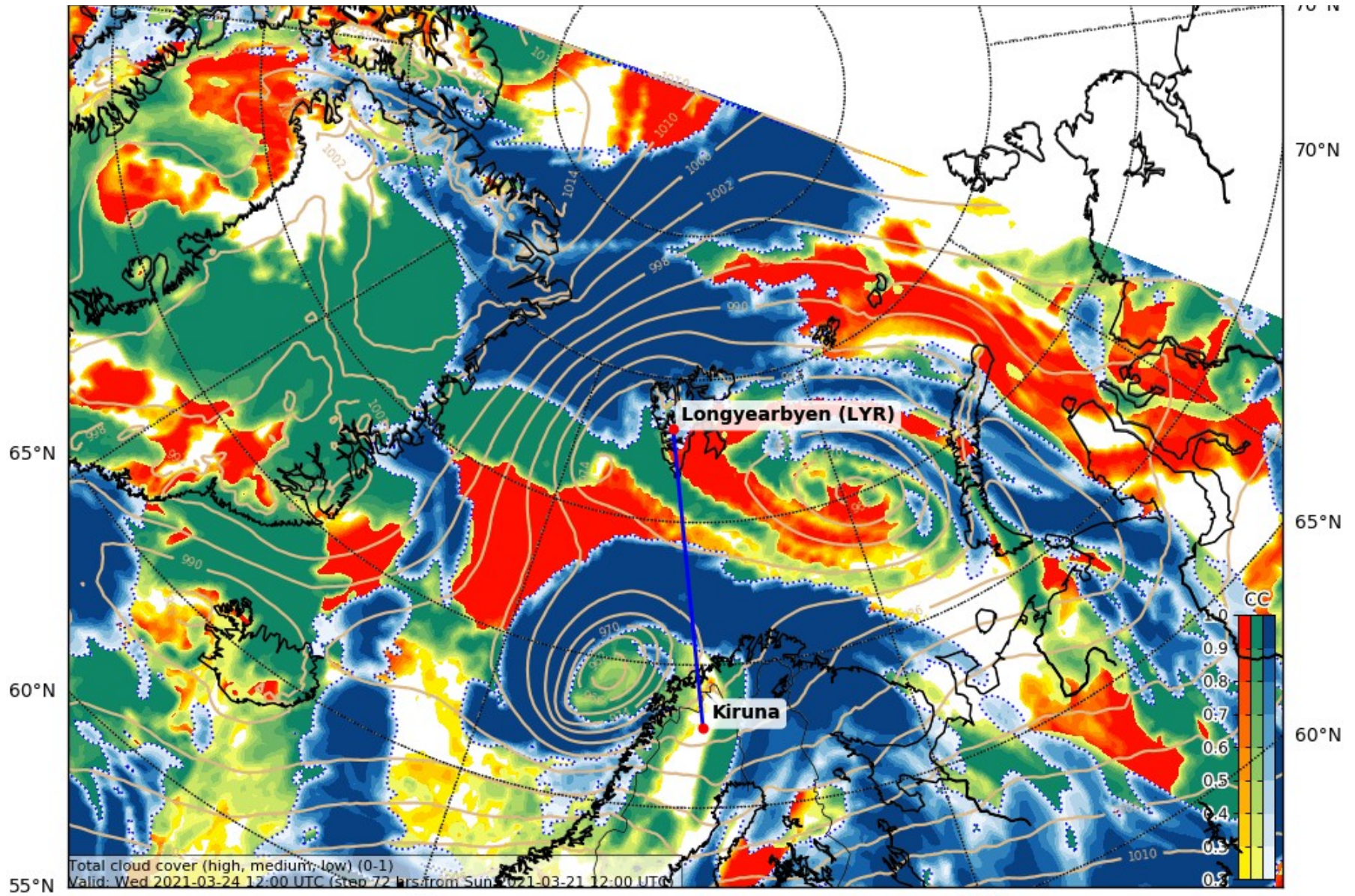
## Mean sea level pressure and surface wind



# Total cloud cover (Wed, 24.03. 09 UTC, ECMWF)

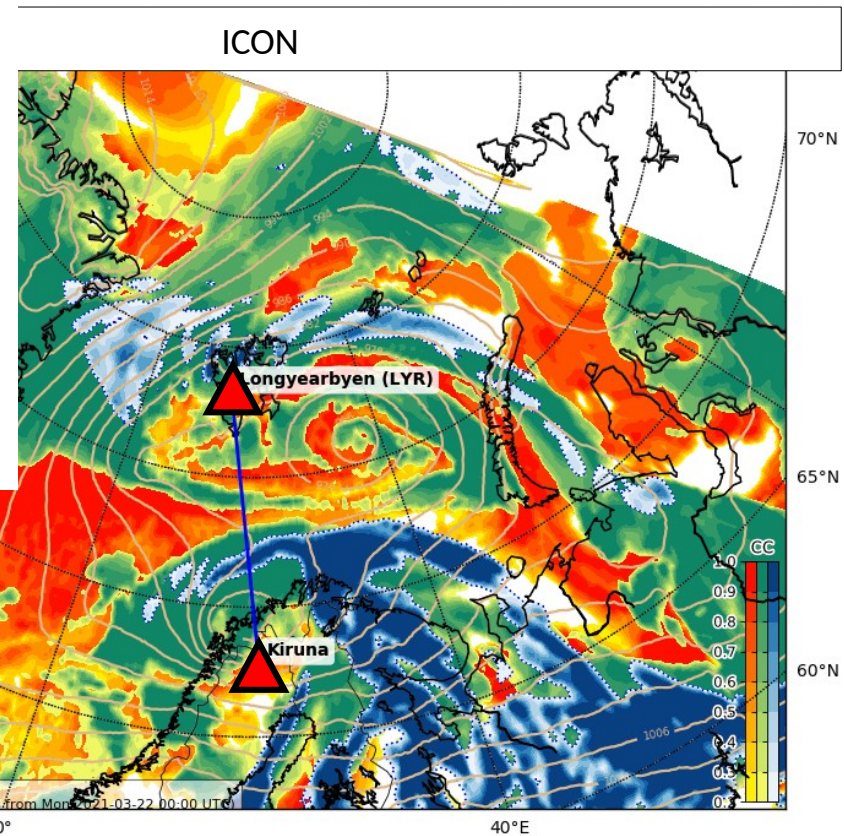
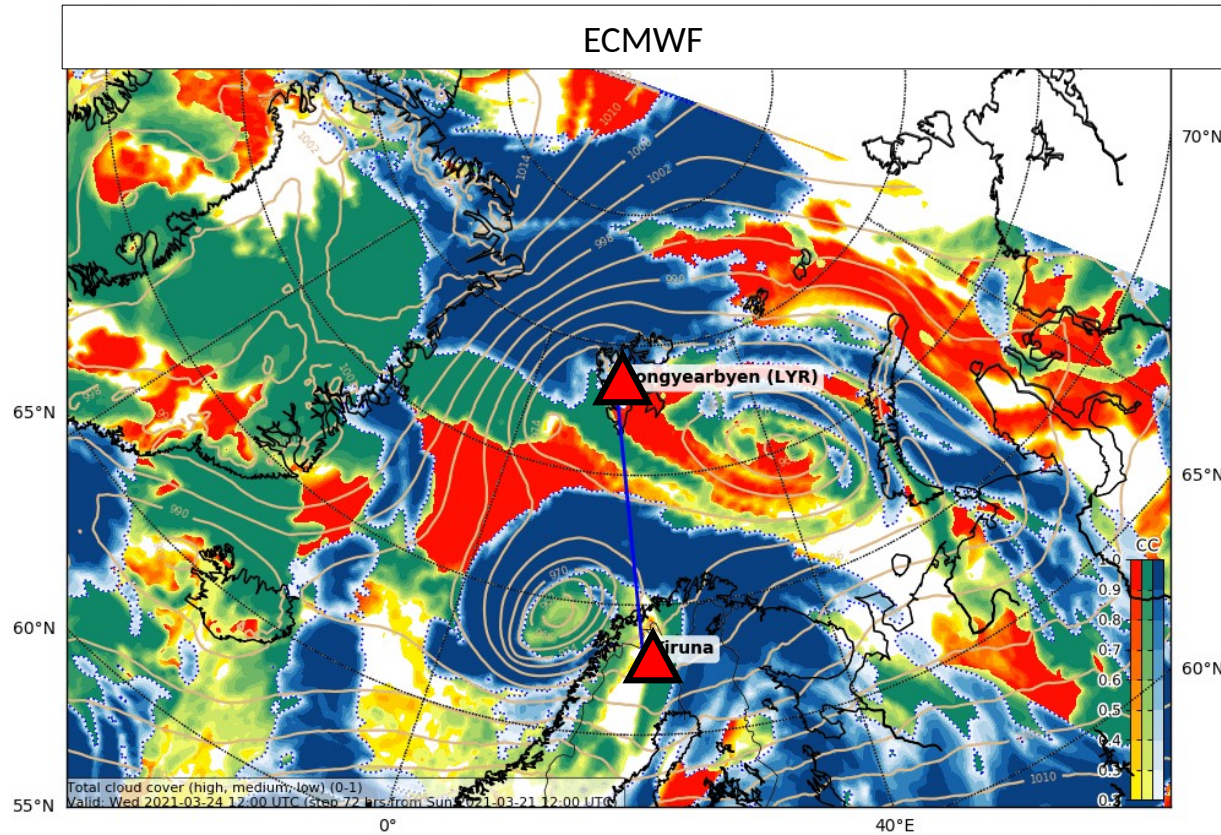


# Total cloud cover (Wed, 24.03. 12 UTC, ECMWF)



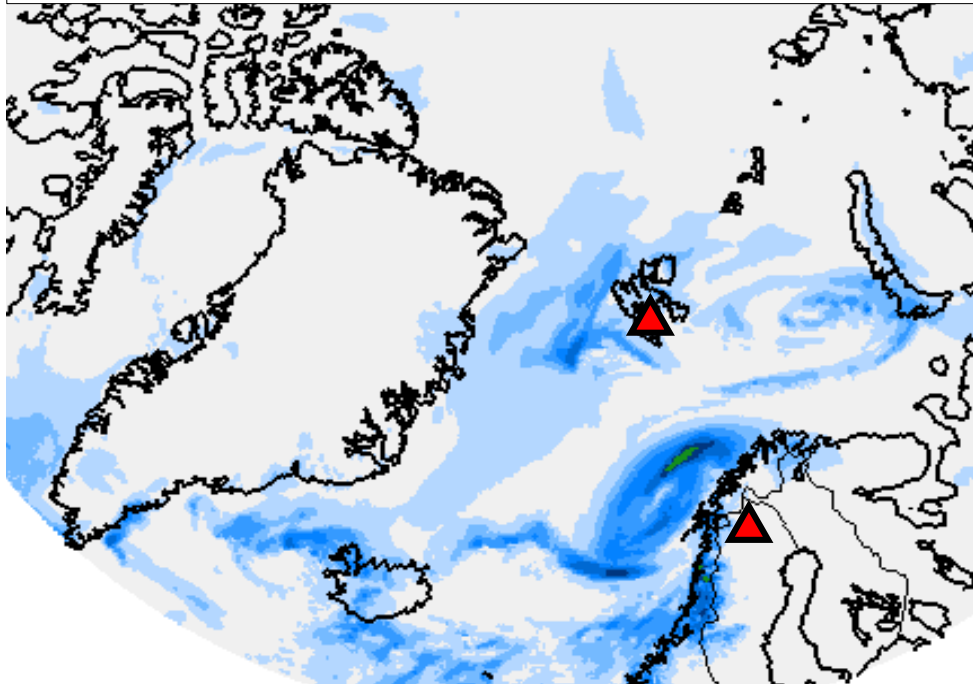


# Total cloud cover - ECMWF vs. ICON (Wed, 24.03. 12 UTC)

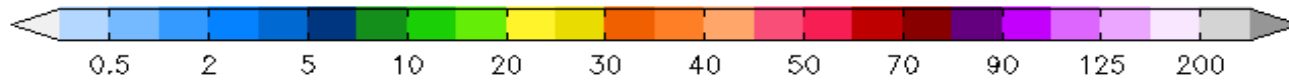
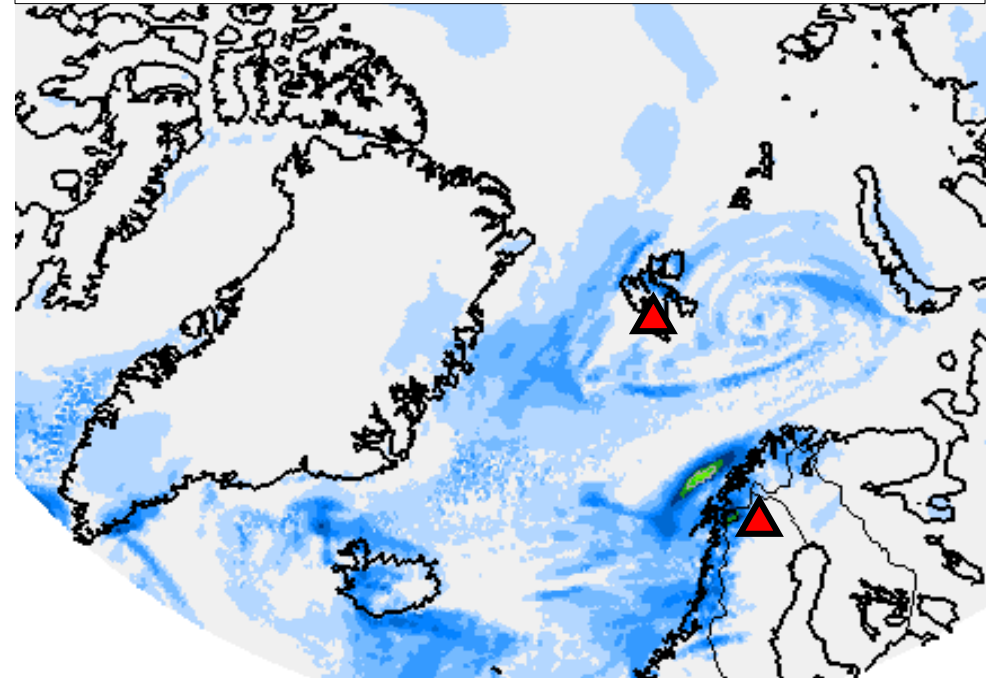


### 3h - Surface Precipitation (Wed, 24.03. 12 UTC)

ECMWF



ICON

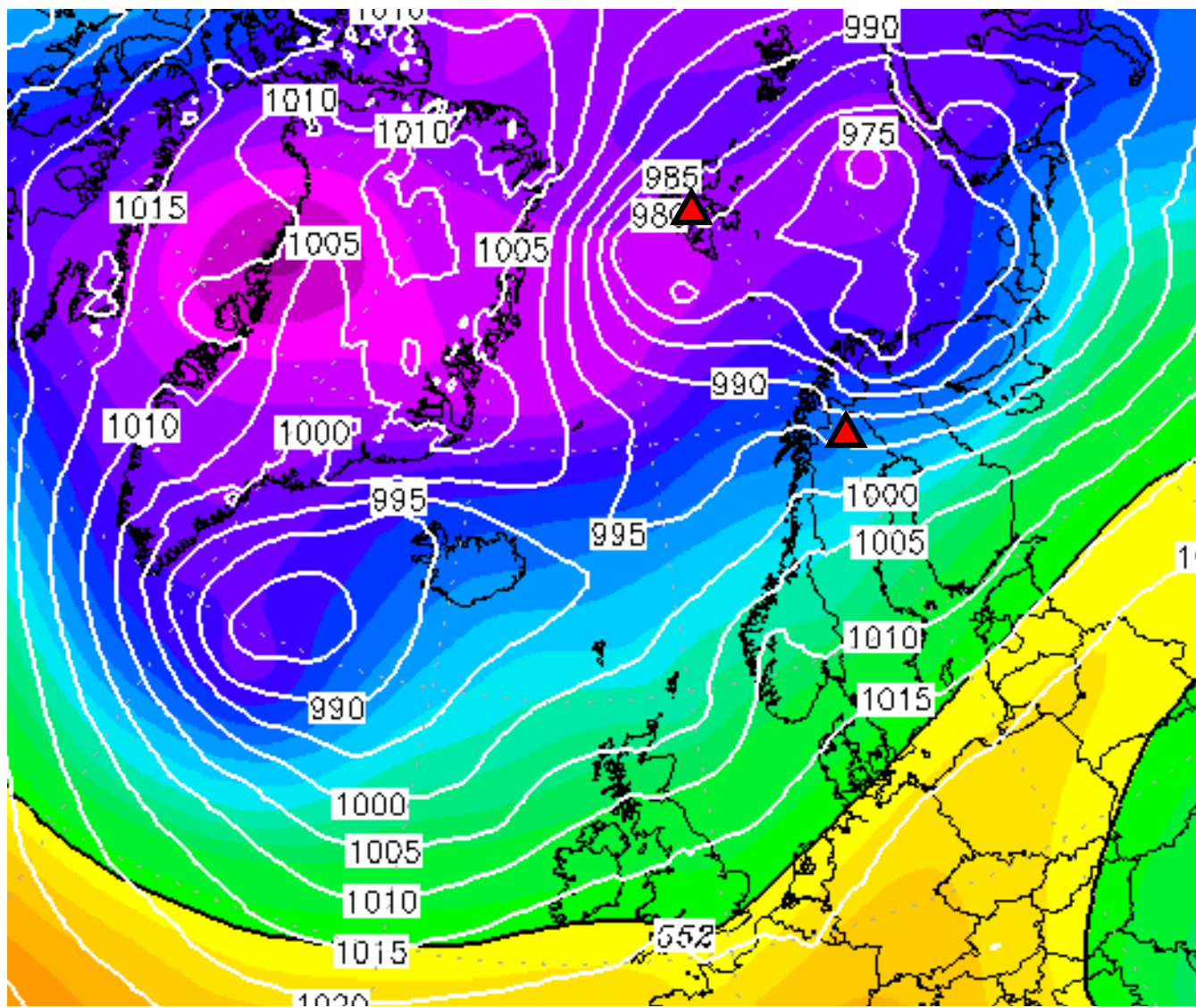


## Summary: Wed, 24.03.2021

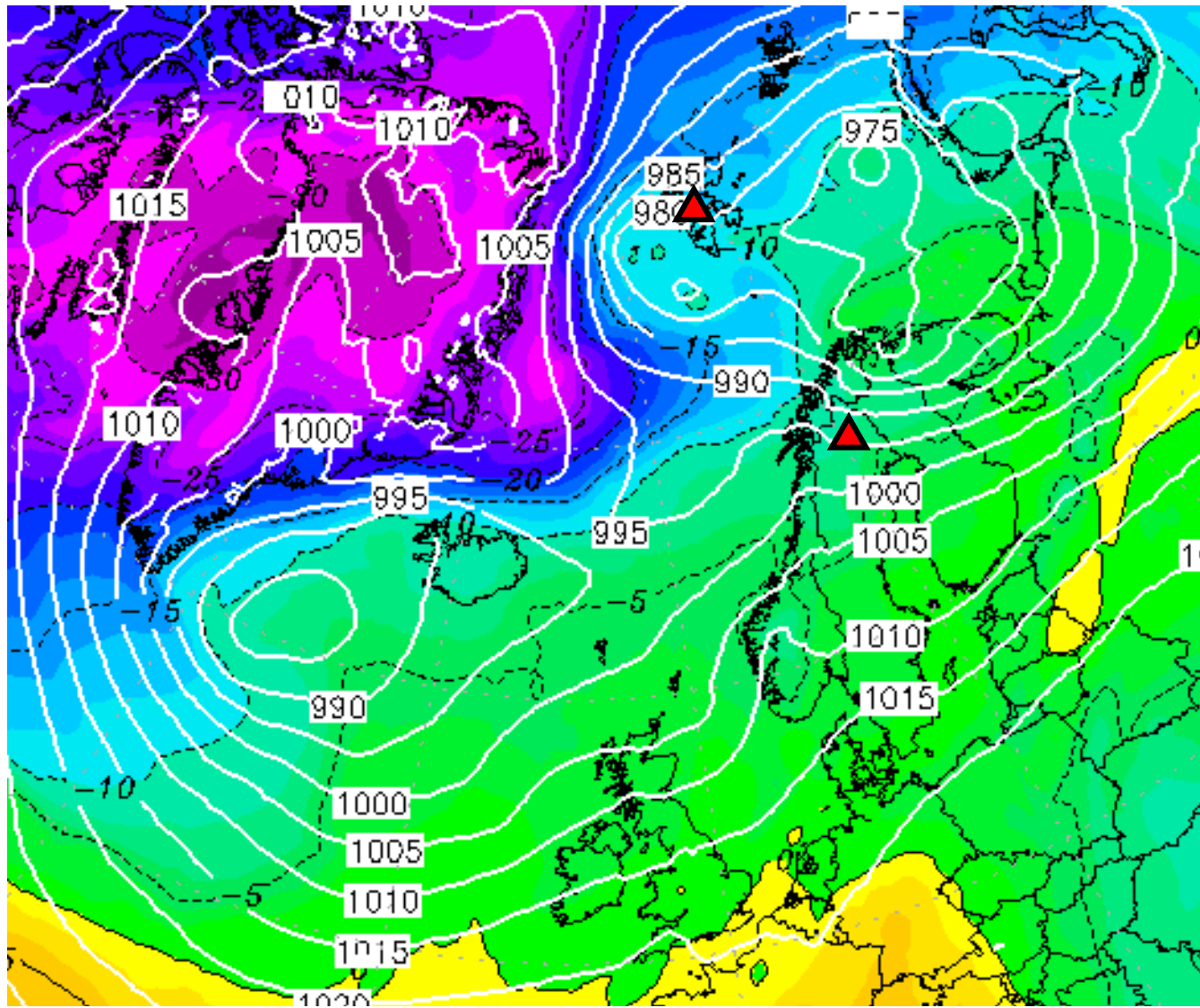
- Low pressure system that passed yesterday will become stationary east of Svalbard
- Moist airmass with high amount of clouds (in all layers) and some precipitation around Svalbard
- Low will pass Kiruna in the early afternoon, but only limited amount of precipitation in lee of Scandinavian mountain

Thursday, 25 March 2021

# Geopotential 500hpa (gpdm) & Surface Pressure (hPa) (Thu, 25.03. 00 UTC, ECMWF)

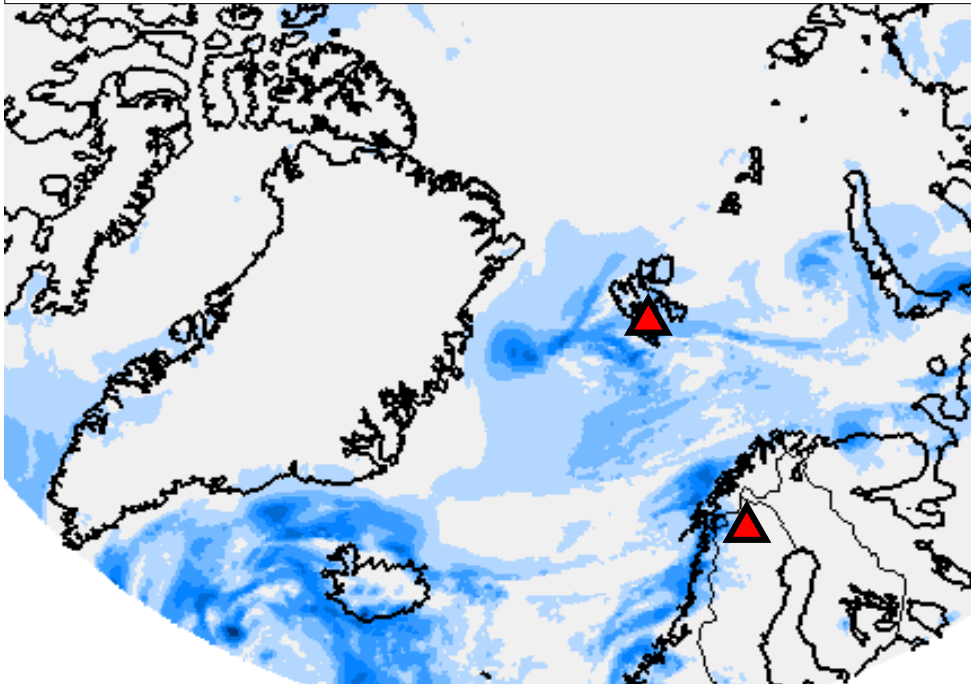


# Temperature 850 hPa (°C) & Surface Pressure (hPa) (Thu, 25.03. 00 UTC, ECMWF)

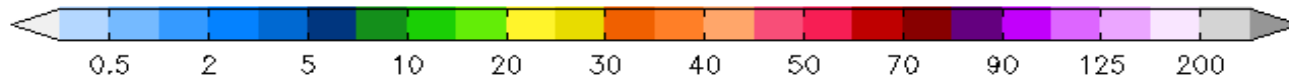
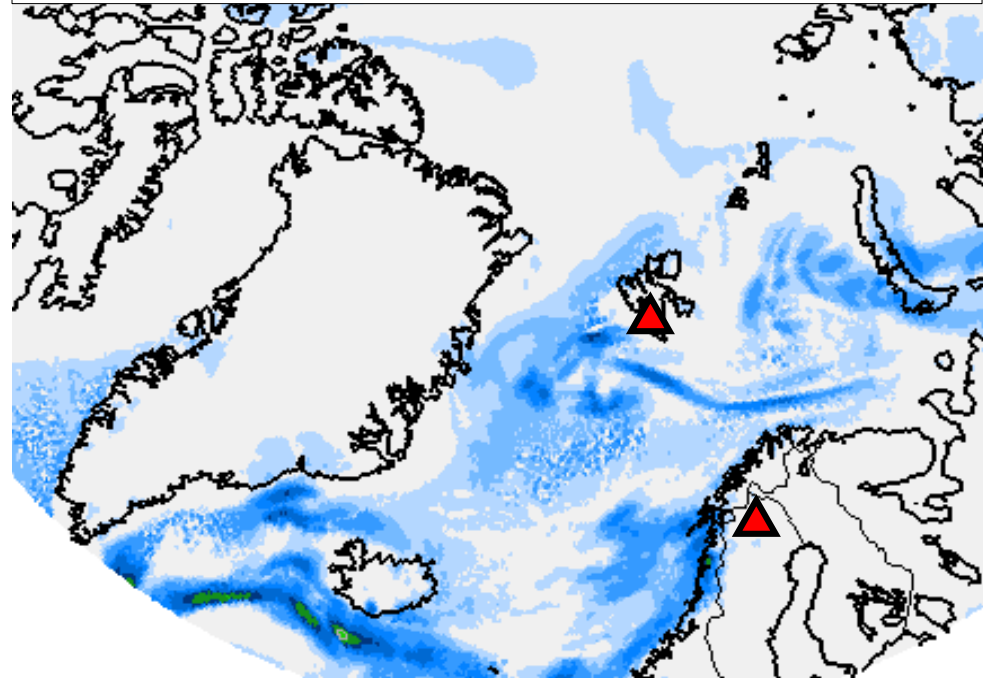


### 3h - Surface Precipitation (Thu, 25.03. 12 UTC)

ECMWF



ICON

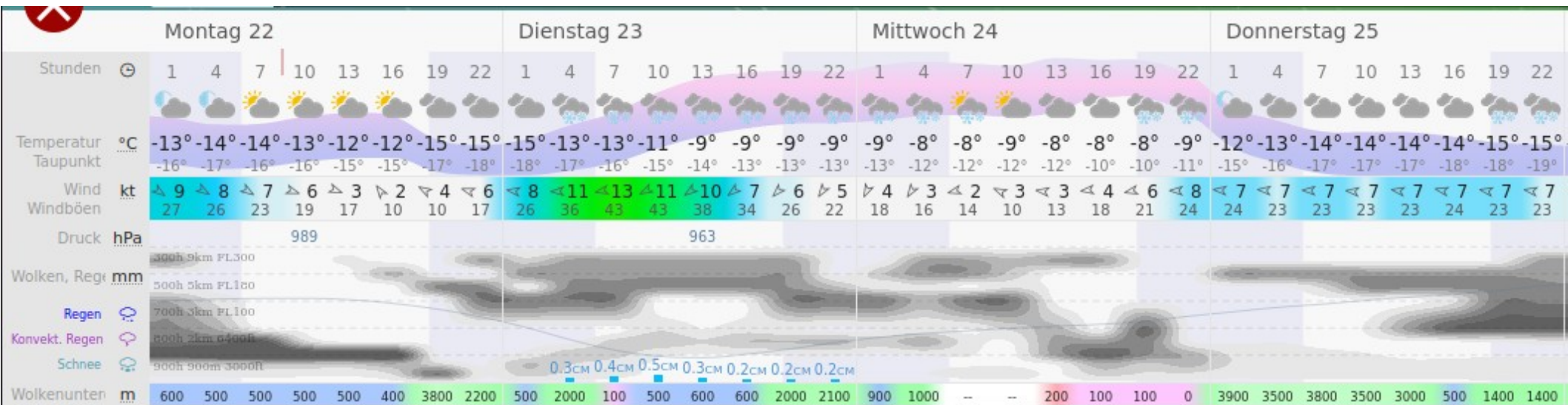


## Summary: Thu, 25.03.2021

- Stationary low pressure system east of Svalbard is slowly decaying
- Weak low south of Svalbard causes upward motion and high amount of clouds (in all layers) in the moist airmass
- Continued precipitation in the region of interest



# Meteogram Longyearbyen (Mon 22.03. - Thu 25.03)



# Meteogram Kiruna (Mon 22.03. - Thu 25.03)

