

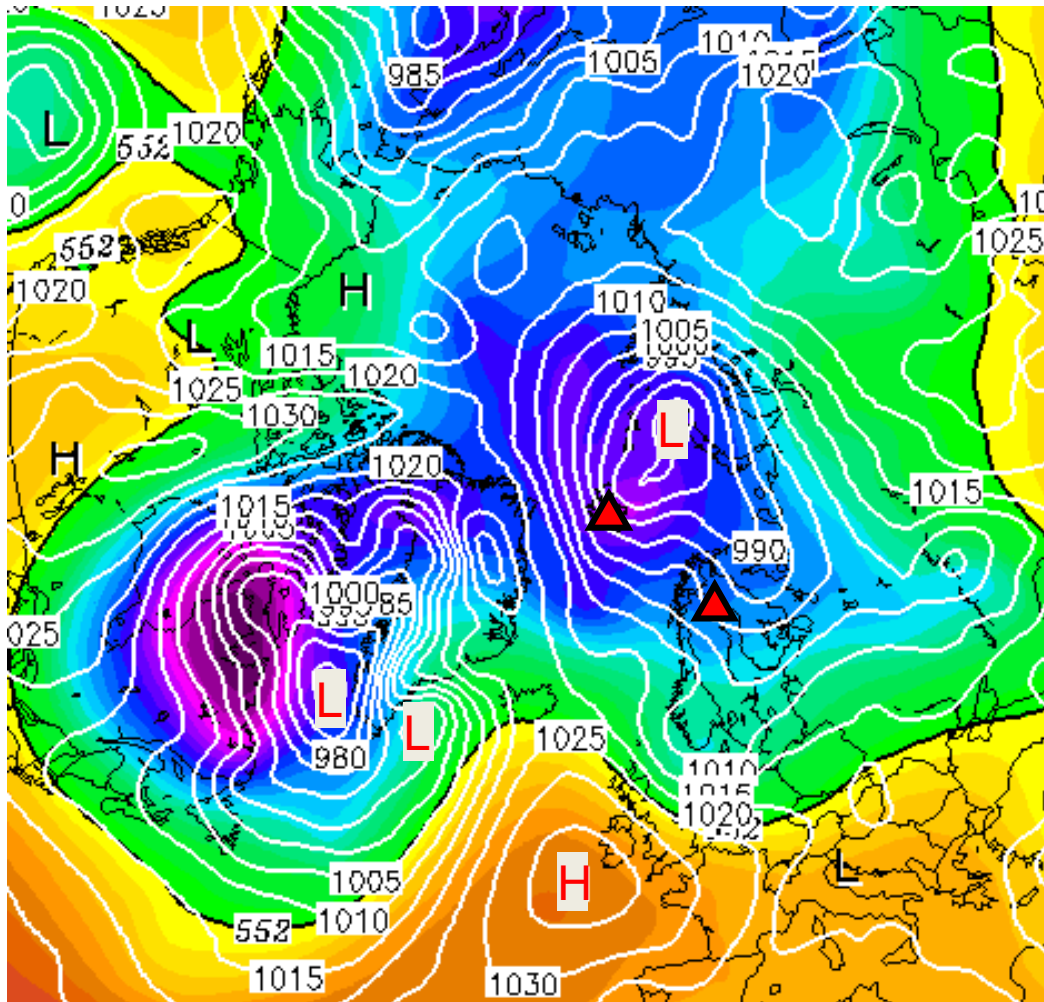
Weather briefing HALO-(AC)³

Cold Air Outbreak: 25 March 2019

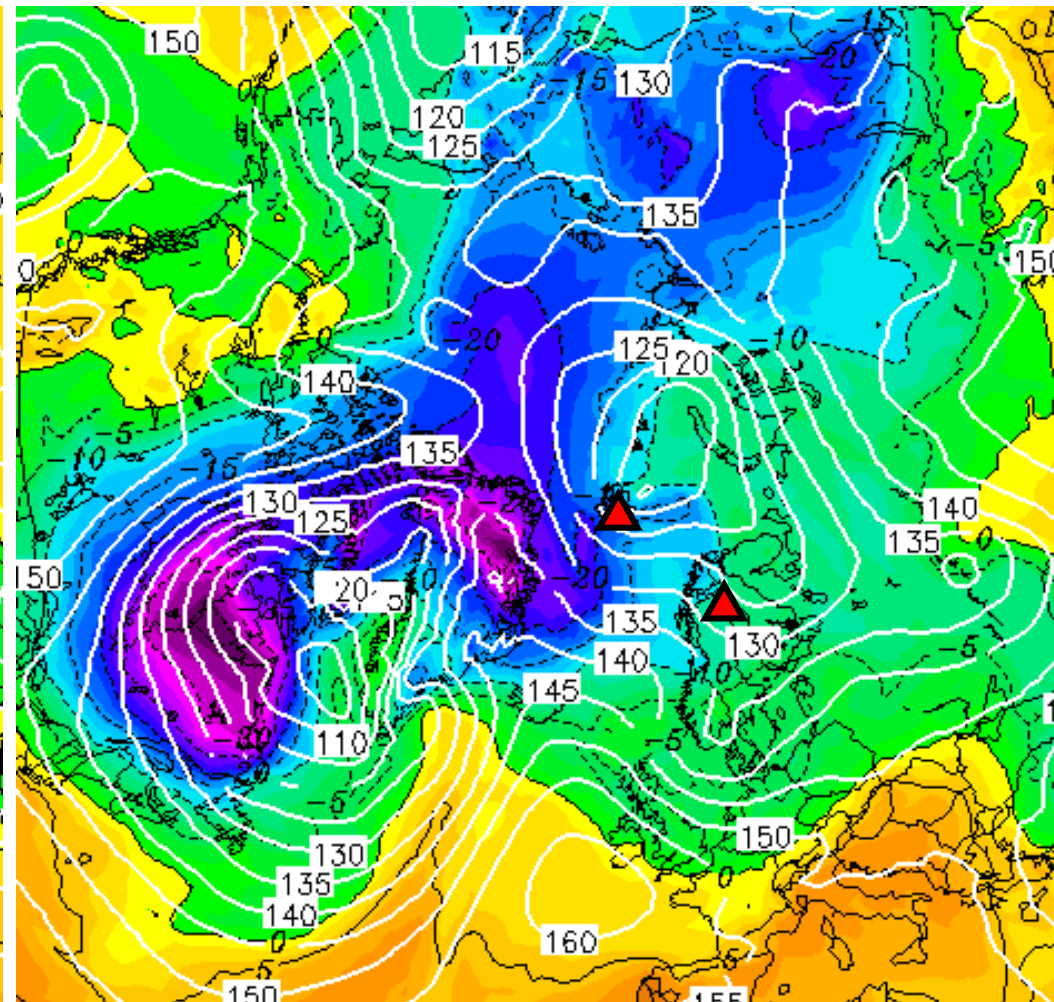
Monday, 25 March 2019

General weather situation (GFS): 25/03, 00 UTC

500hPa Geopotential & Surface Pressure

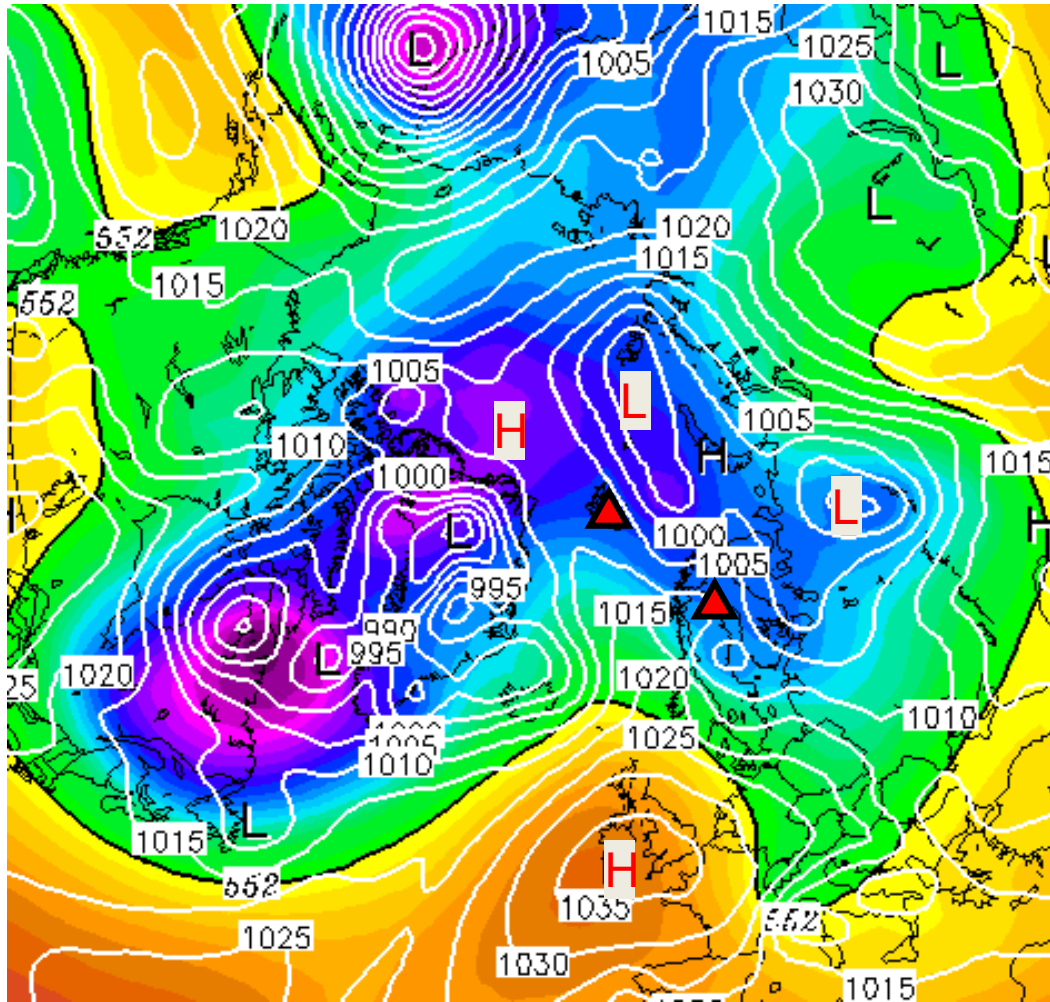


850hPa Geopotential & Temperature

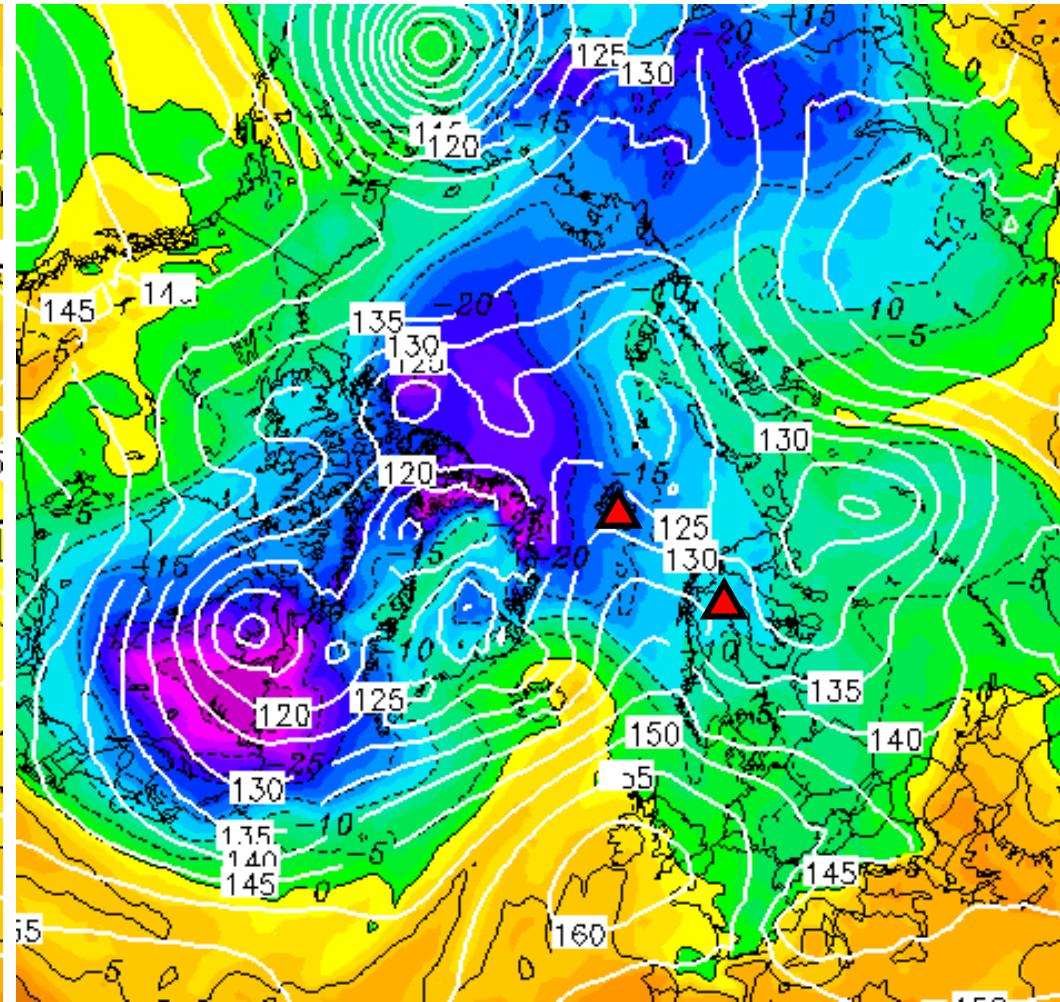


General weather situation (GFS): 26/03, 00 UTC

500hPa Geopotential & Surface Pressure

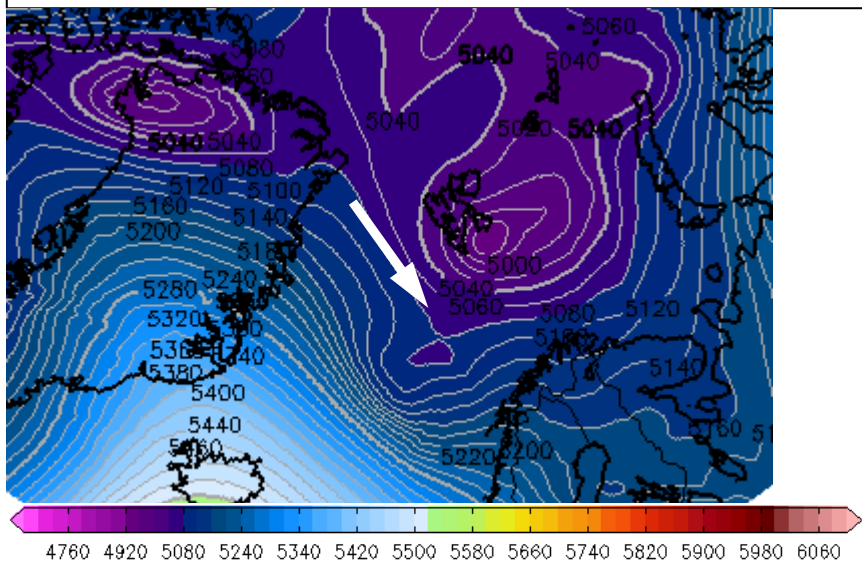


850hPa Geopotential & Temperature

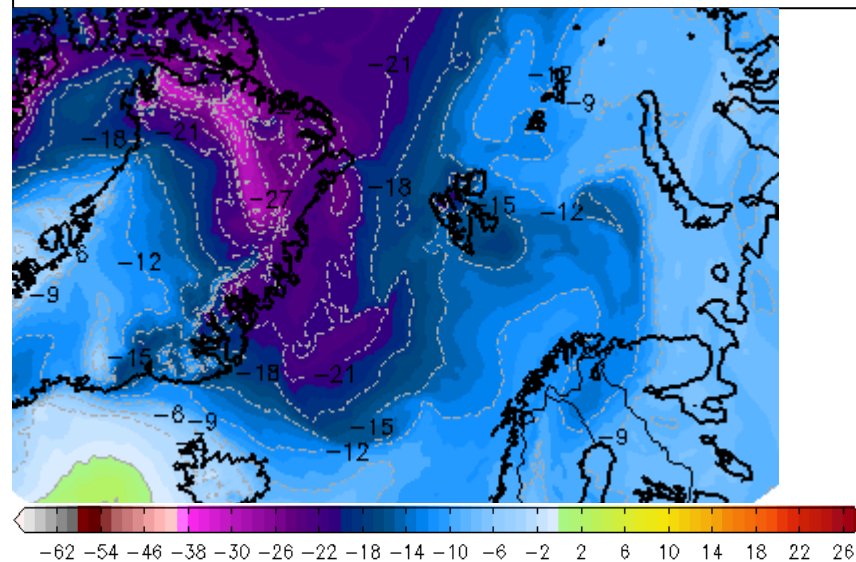


General weather situation (ECMWF): 25/03, 06 UTC

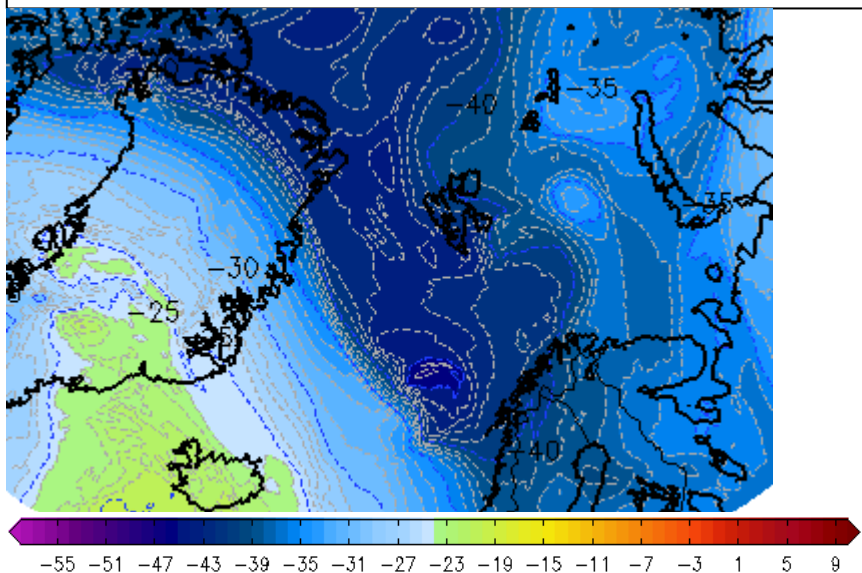
500hPa: Geopotential Height (in m)



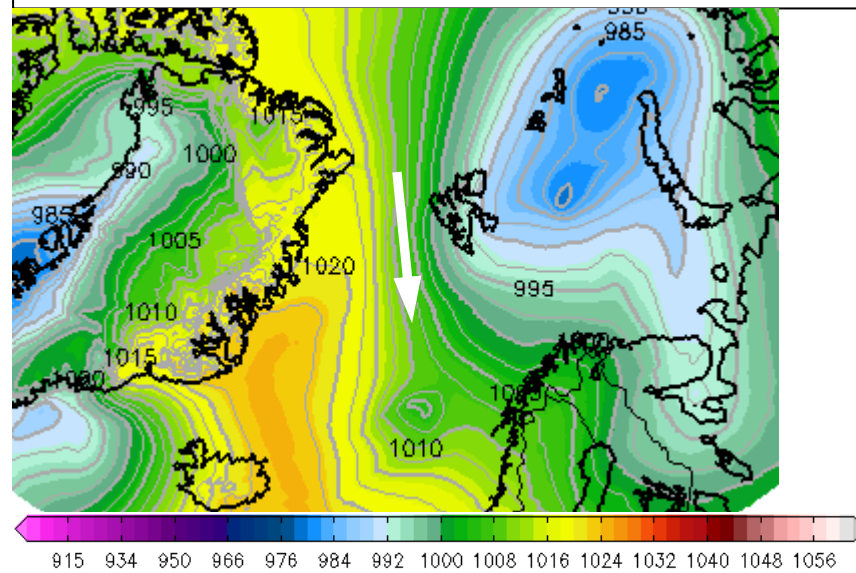
850hPa: Temperature (in °C)



500hPa: Temperature (in °C)

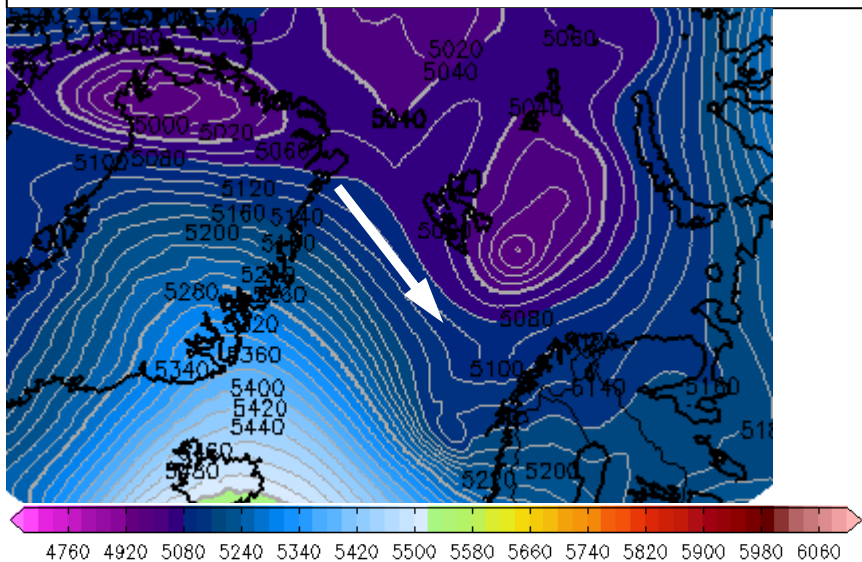


Mean sea level pressure (in hPa)

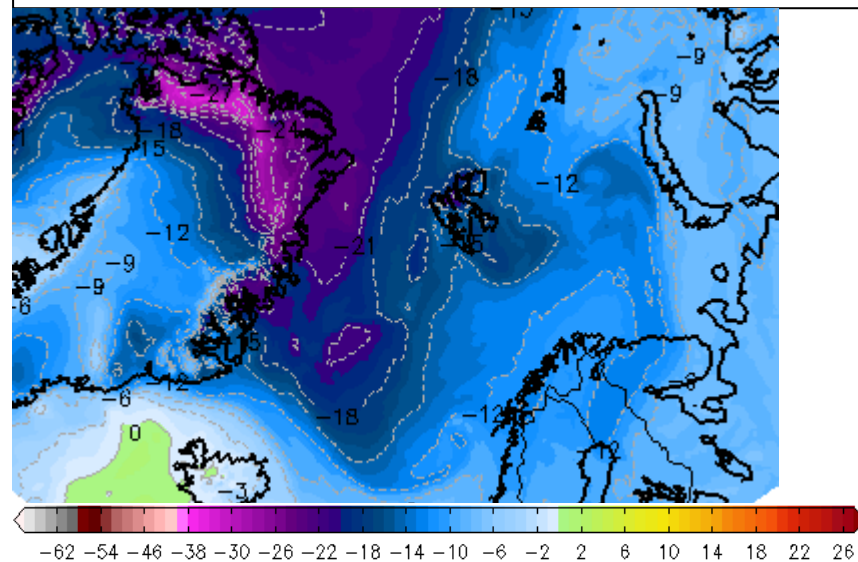


General weather situation (ECMWF): 25/03, 12 UTC

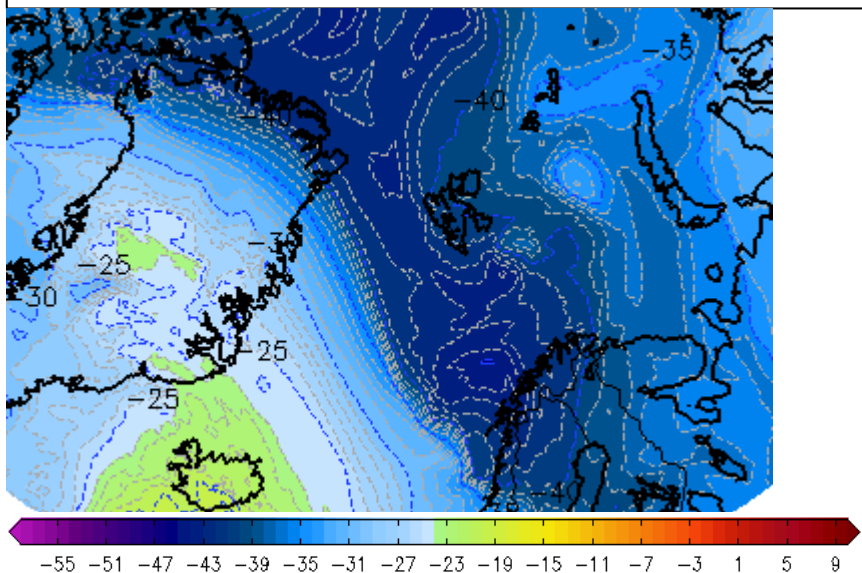
500hPa: Geopotential Height (in m)



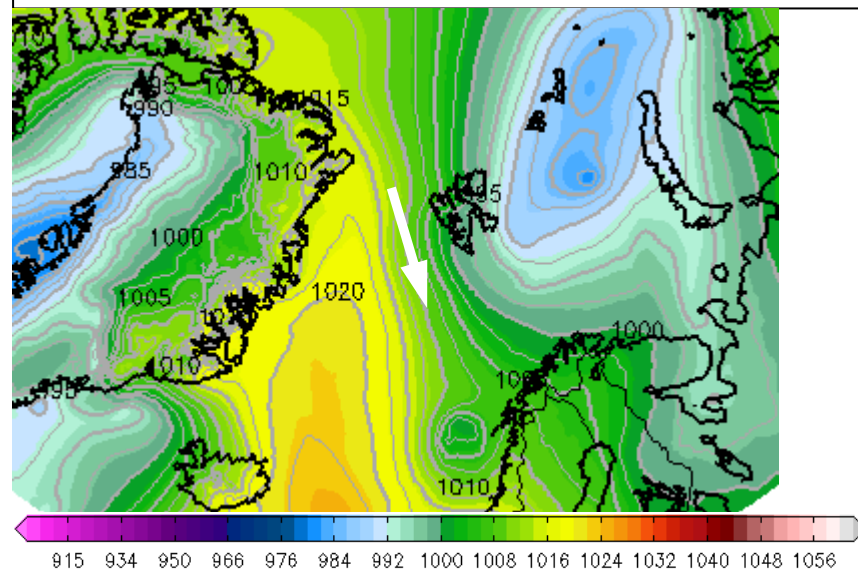
850hPa: Temperature (in °C)



500hPa: Temperature (in °C)

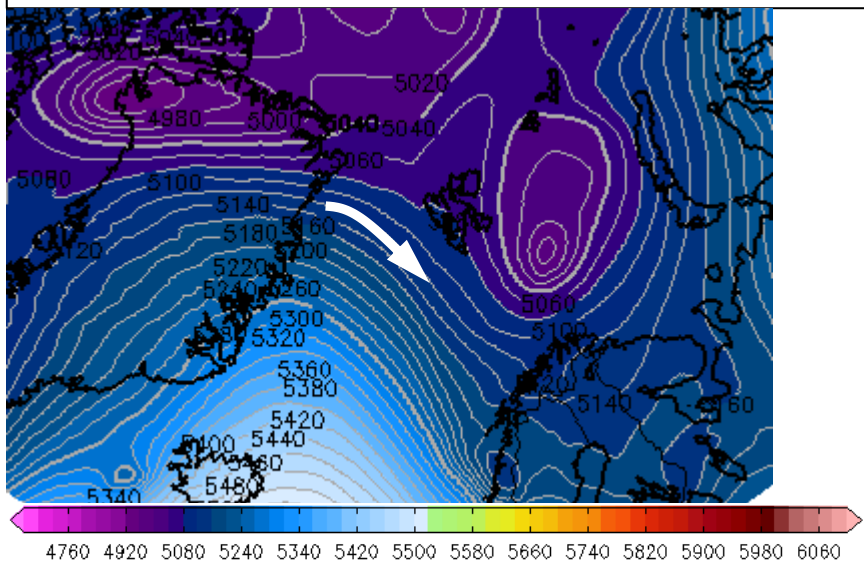


Mean sea level pressure (in hPa)

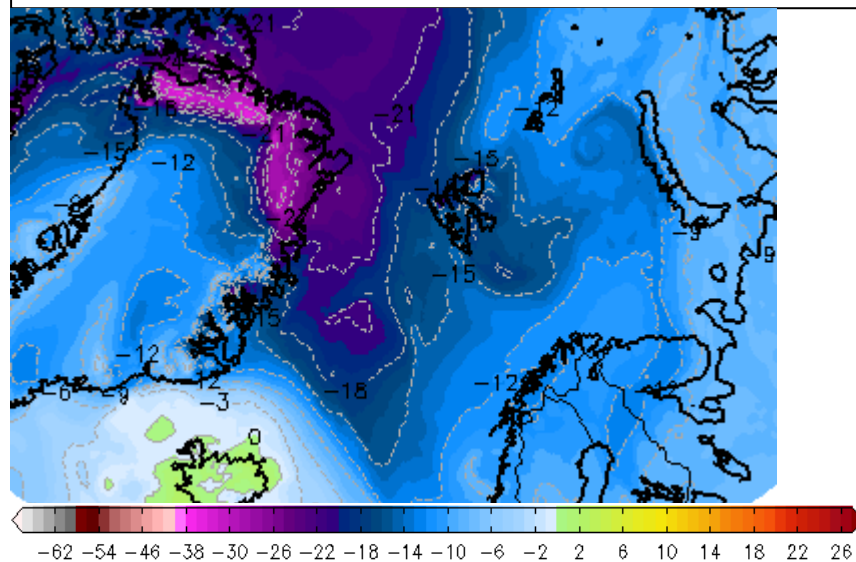


General weather situation (ECMWF): 25/03, 18 UTC

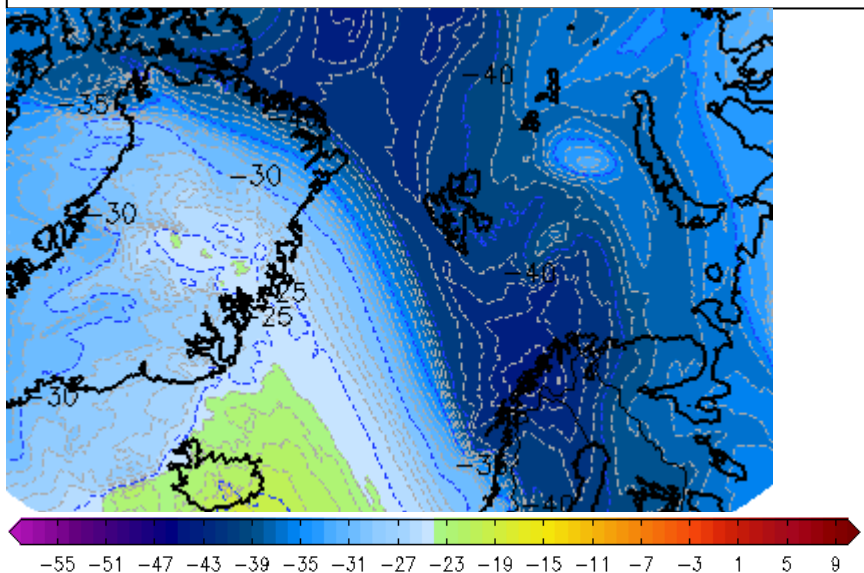
500hPa: Geopotential Height (in m)



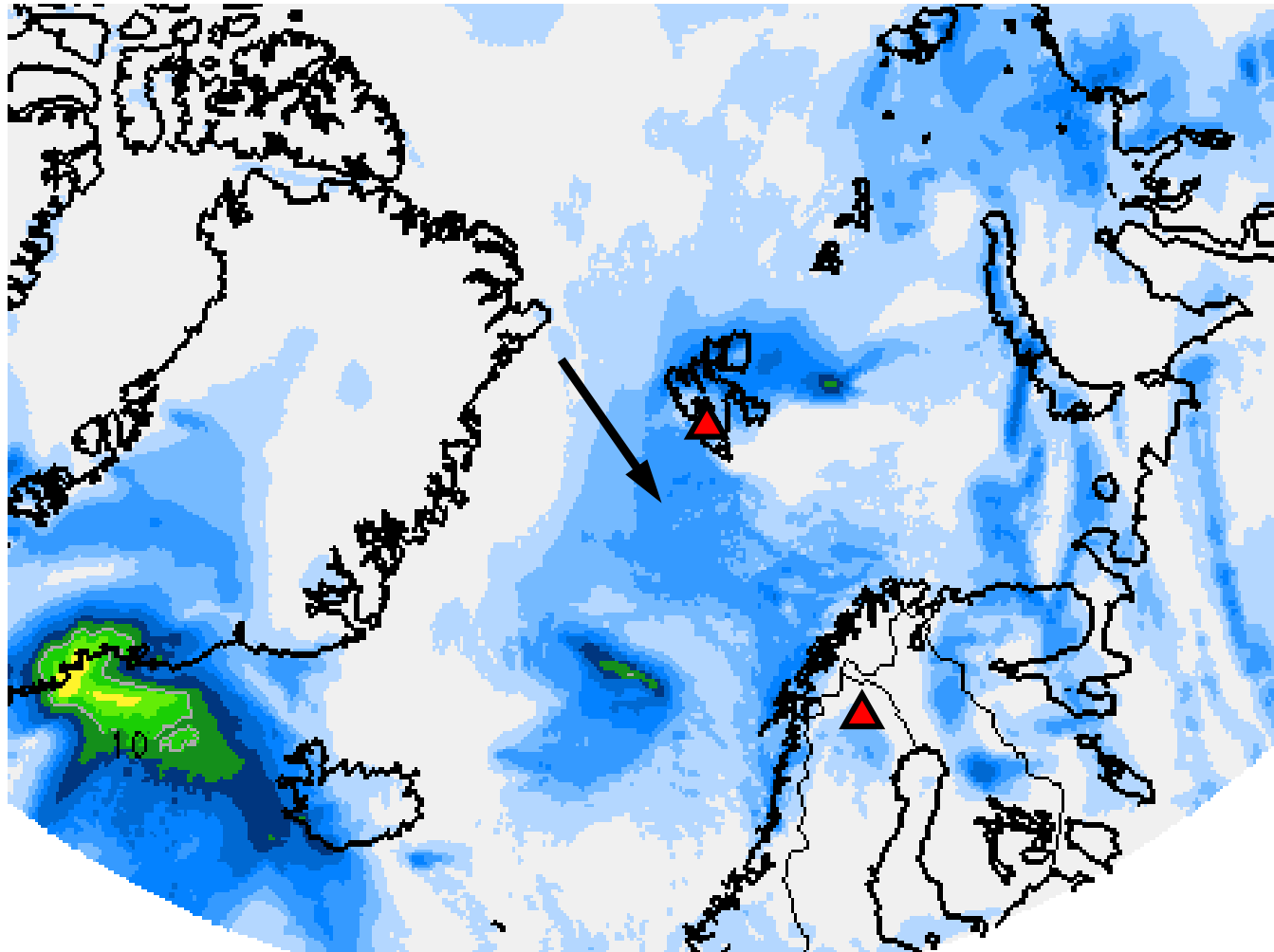
850hPa: Temperature (in °C)



500hPa: Temperature (in °C)

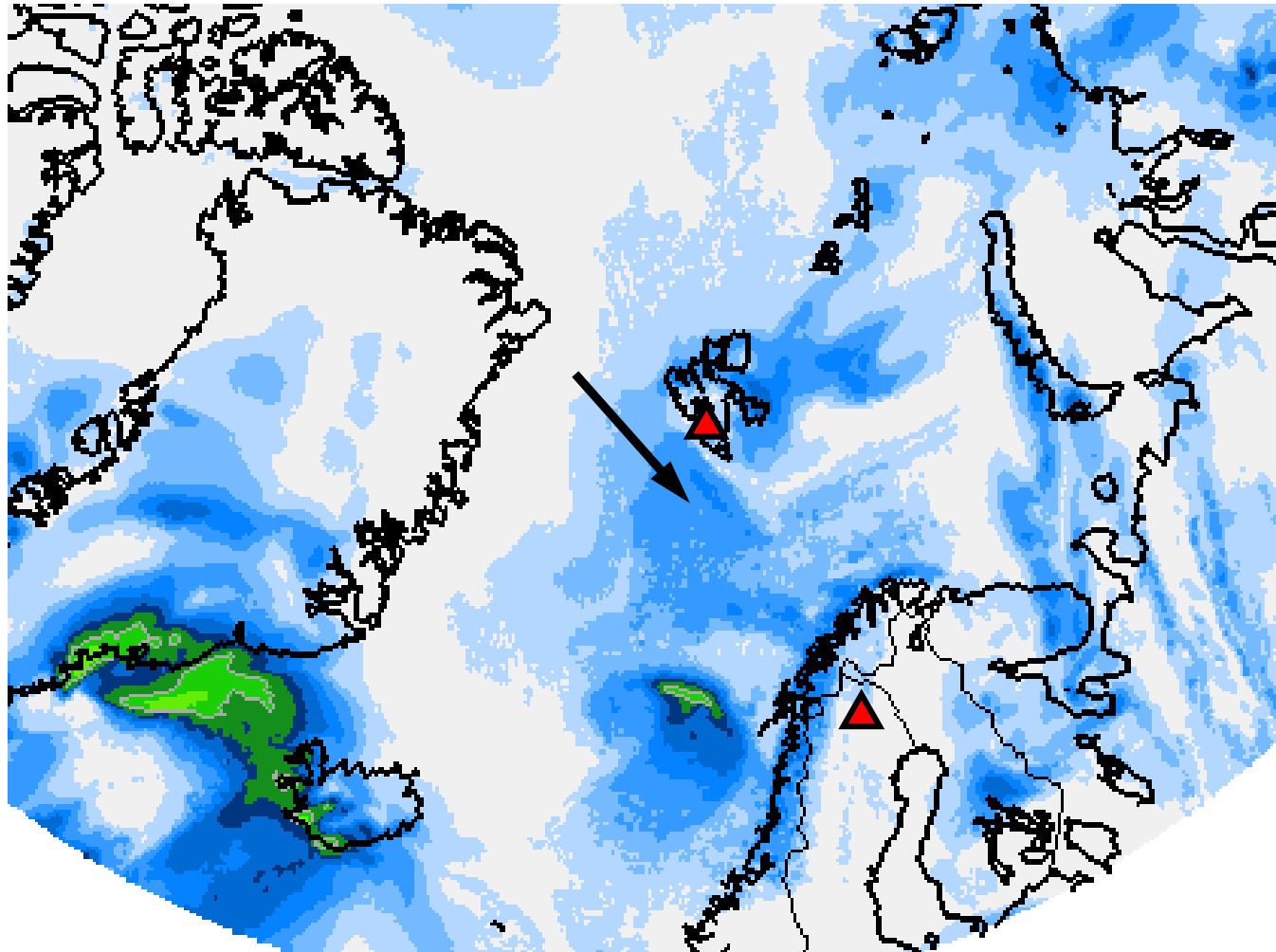


6 hour precipitation (ECMWF): 25/03, 06 UTC



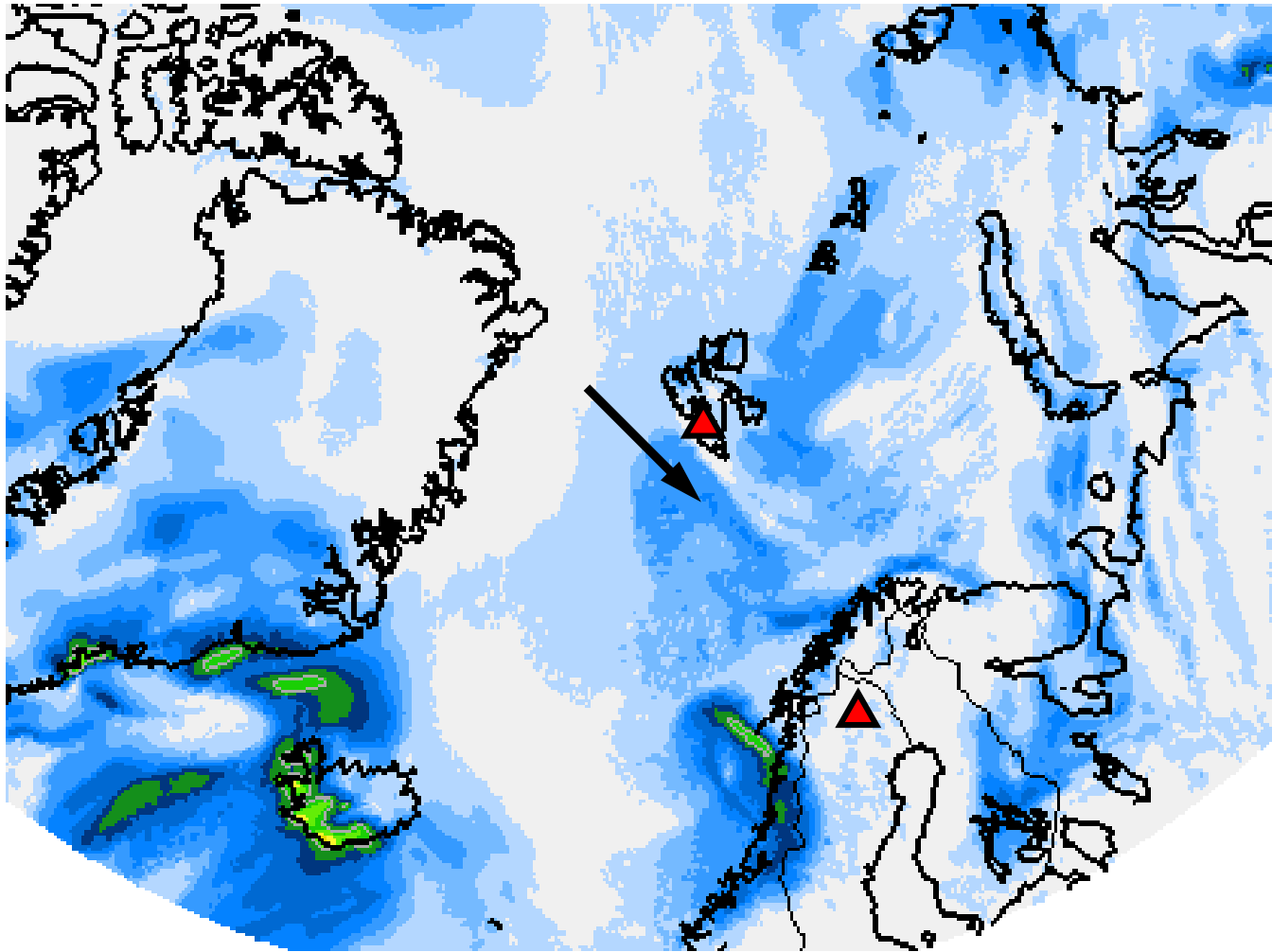
- Gradually increasing precipitation with greater distance from sea ice edge
- Remarkable Precipitation from secondary cyclone to SW of Svalbard

6 hour precipitation (ECMWF): 25/03, 12 UTC



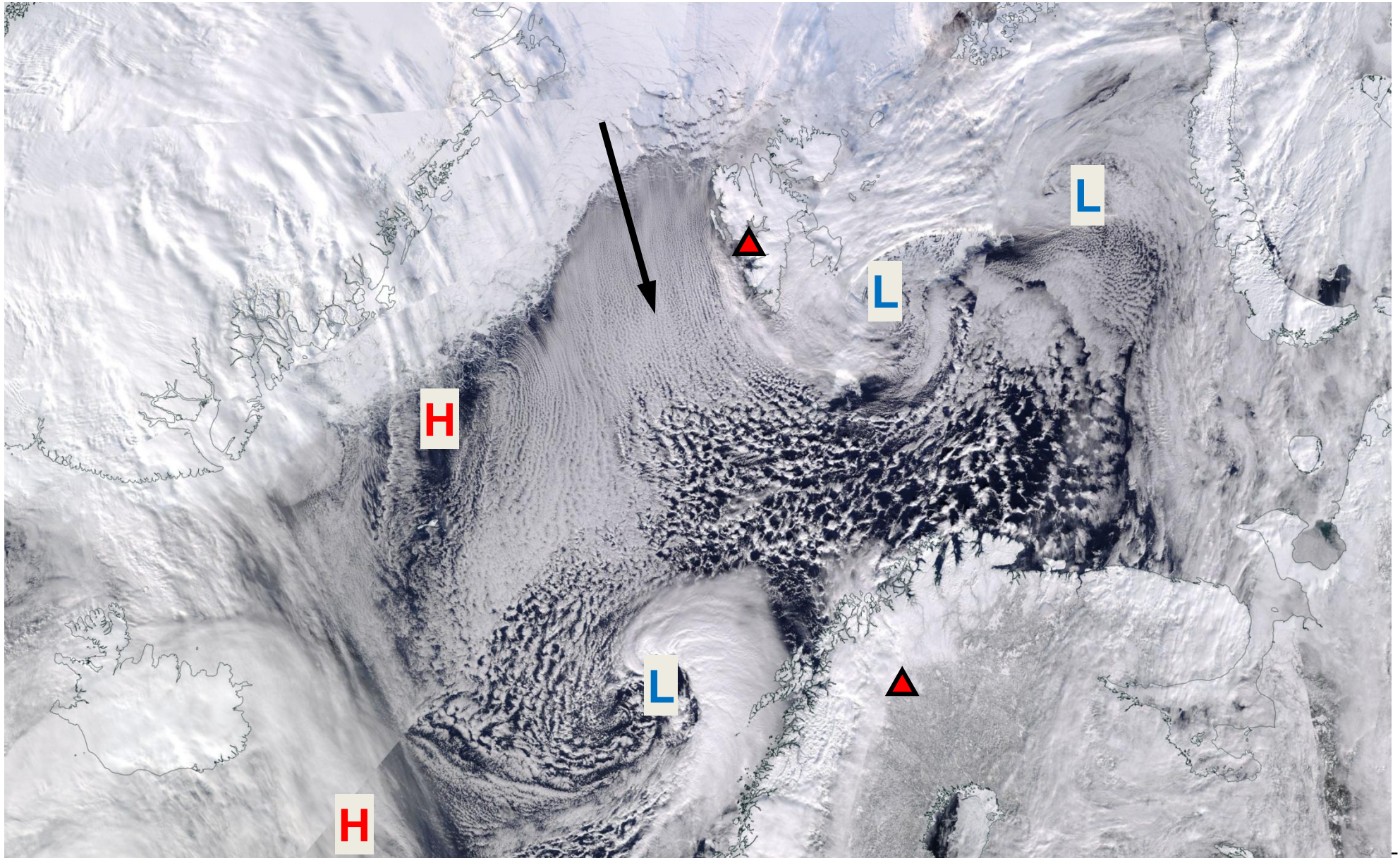
- Cyclogenesis of secondary cyclone
- Precipitation pattern W of Svalbard still nearly identical

6 hour precipitation (ECMWF): 25/03, 18 UTC



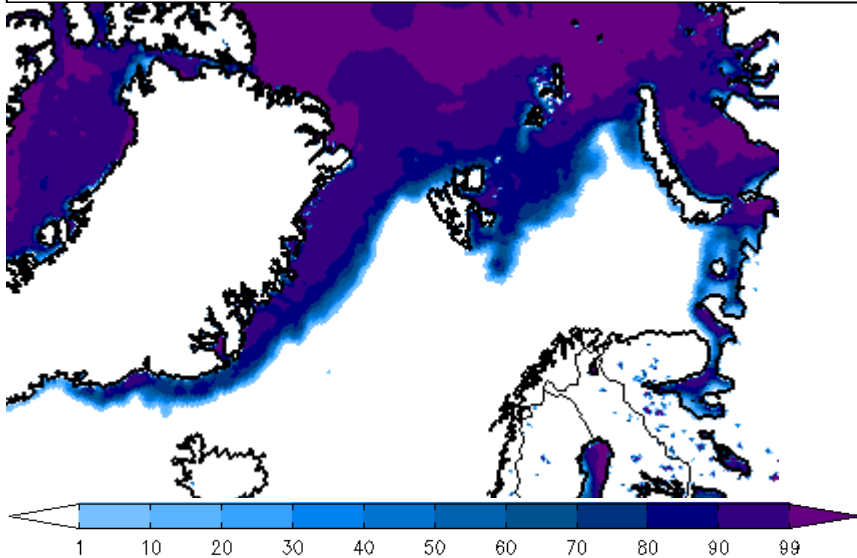
- Secondary cyclone hits Norwegian Coast
- Precipitation pattern W of Svalbard moves southeastwards and fade over next 6h

Satellite pictures: 25/03/2019

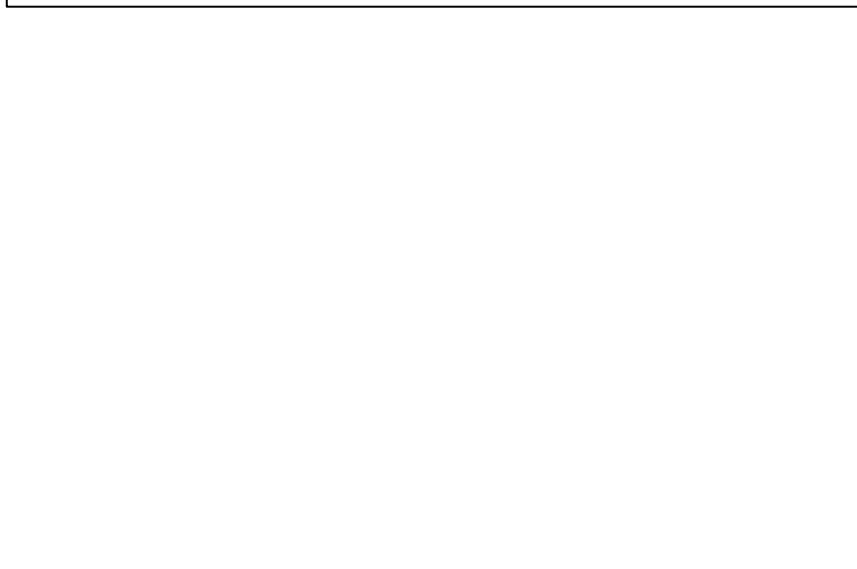


Sea Ice cover, Water vapour & Wind @ 850hPa: Sat. 20/03, 12 UTC

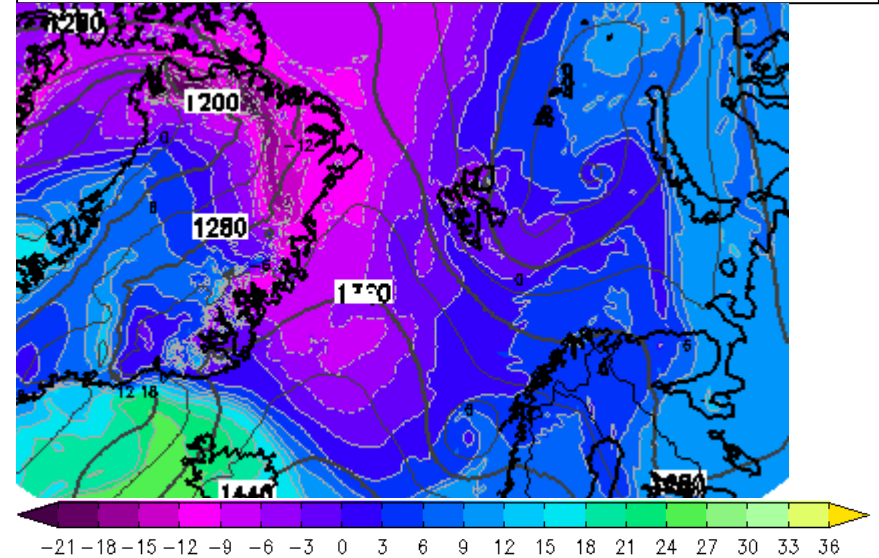
Sea ice concentration



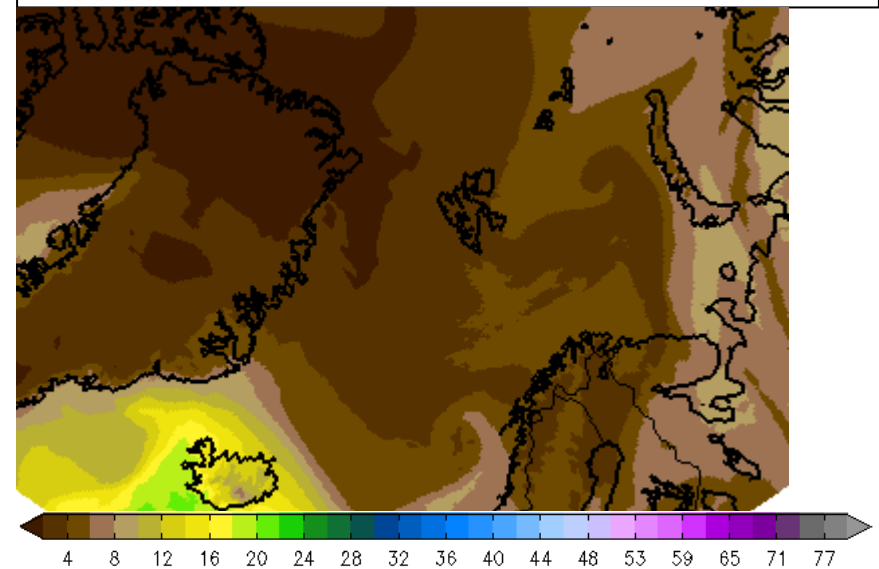
Integrated water vapour transport



850hPa: θ_e (in °C)

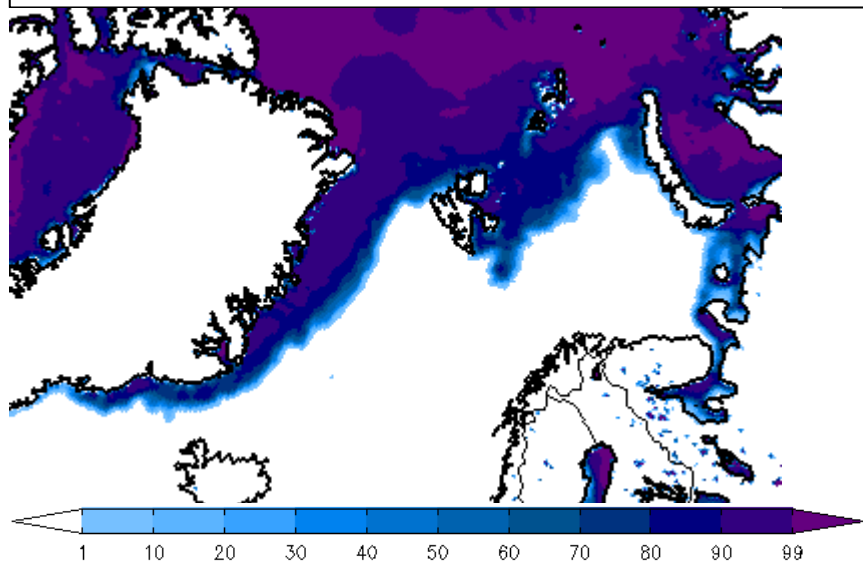


Integrated water vapour (in mm)

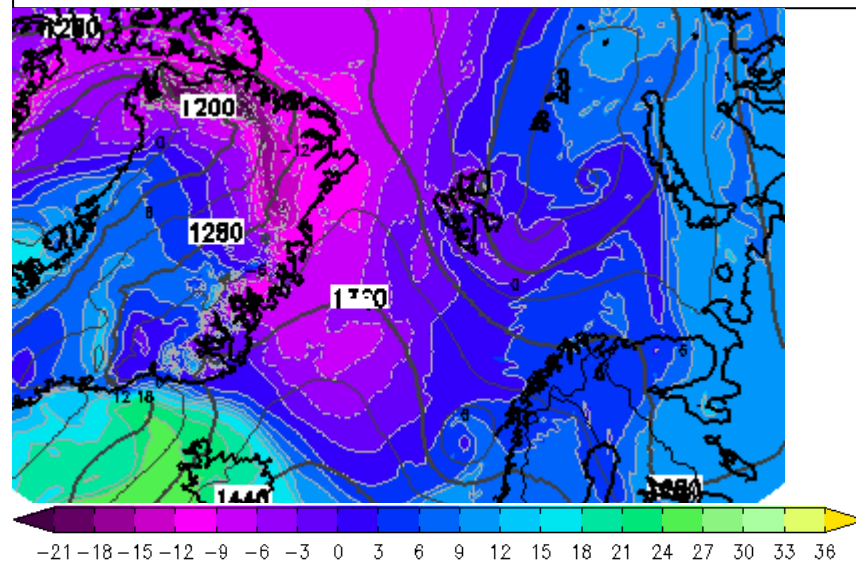


Sea Ice cover, Total cloud cover & Wind @ 850hPa: Sat. 20/03, 12 UTC

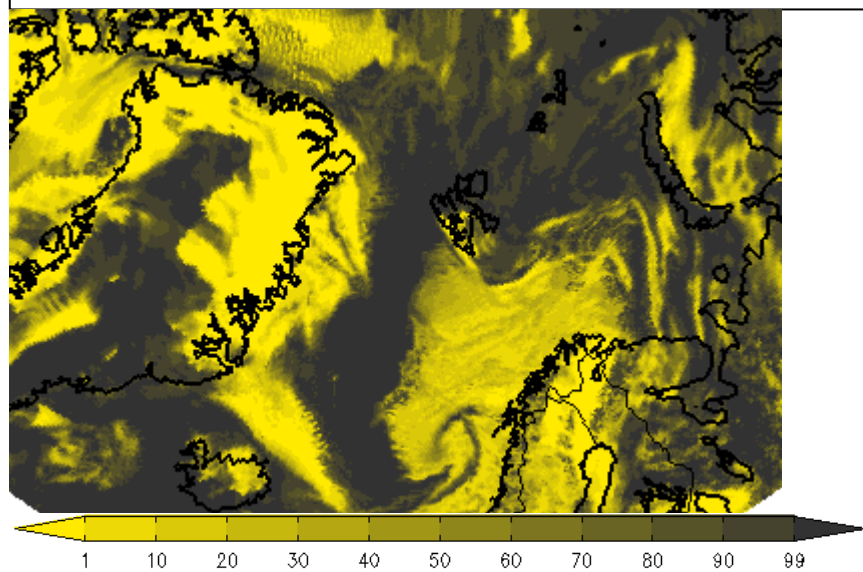
Sea ice concentration



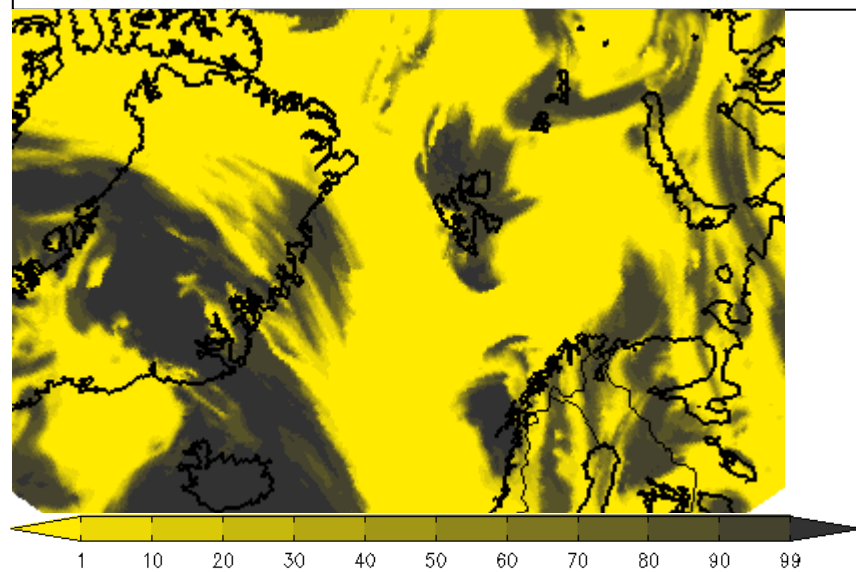
850hPa: θ_e (in °C)



Low cloud cover



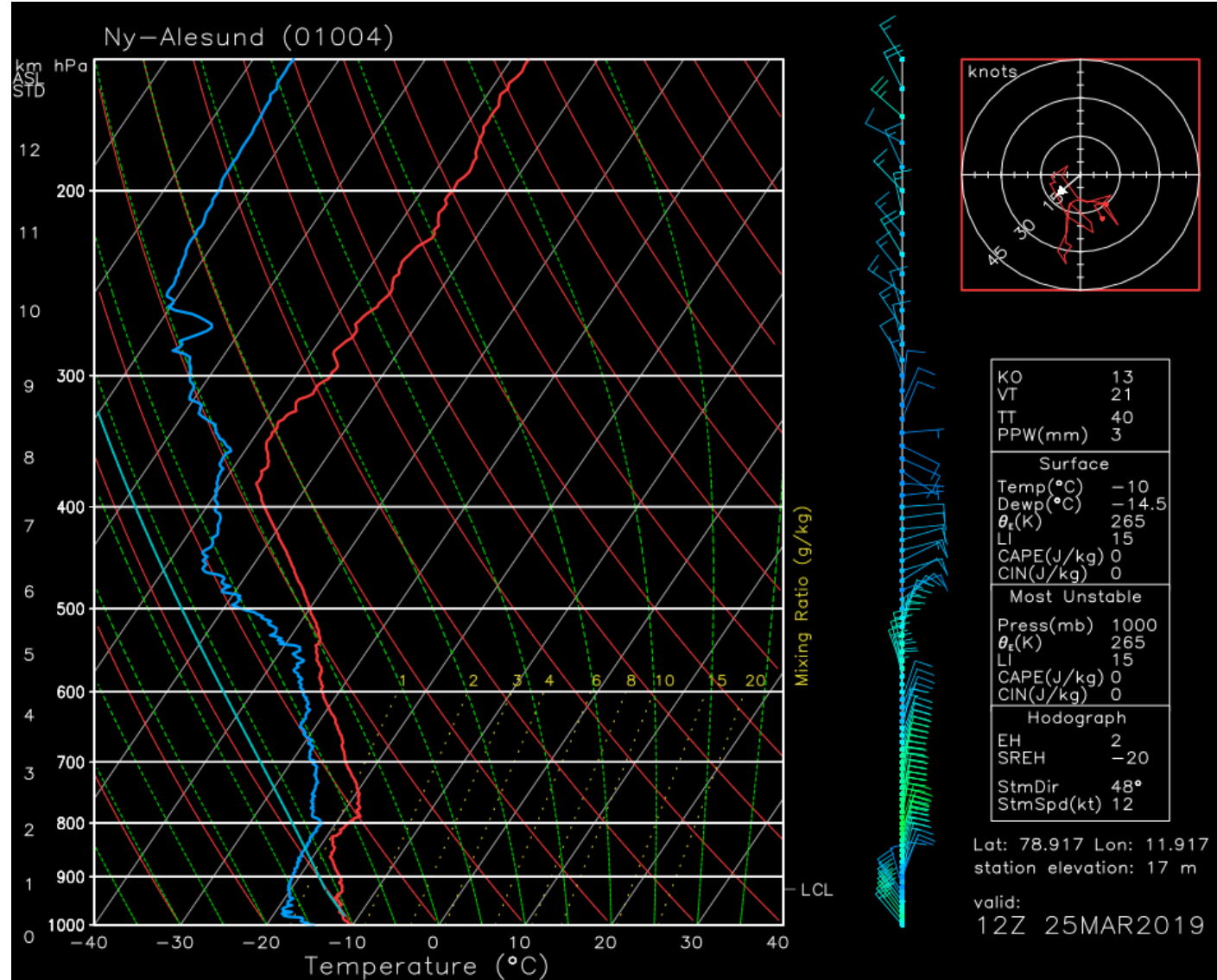
High cloud cover



Radiosonde Ny Alesund: 25/03 12 UTC

North Westerly wind
in the boundary layer

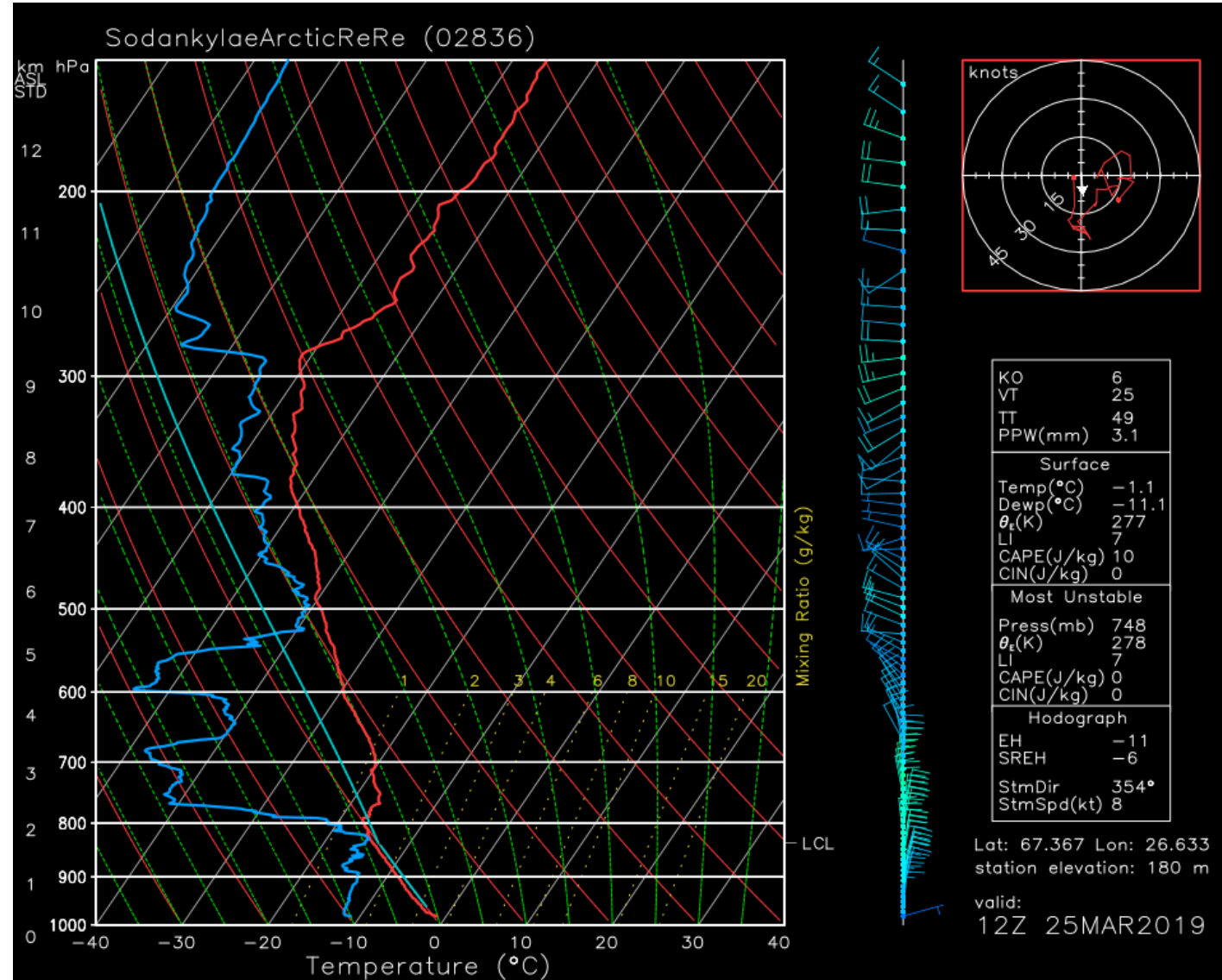
Boundary layer:
surface – 920 hPa



Radiosonde close to Kiruna: 25/03 12 UTC

Well mixed boundary layer with subsidence inversion above

Boundary layer:
surface – 810 hPa



Summary: 25/03/2019

- Cyclone centered to the east of Svalbard
 - North and Northwesterly flow to the west of Svalbard
 - Cold air advected from Arctic Sea ice over open ocean
 - Cloud streets form due to convection

- Northerly flow weakens during the afternoon as the cyclone moves eastwards
 - Cloud streets might become unorganised in the evening (18-24 UTC)

- Clouds over Longyearbyen fade during the day

T PORT OF LONGYE VISIT TURISTKAIA 360



T PORT OF LONGYE VISIT TURISTKAIA 360



