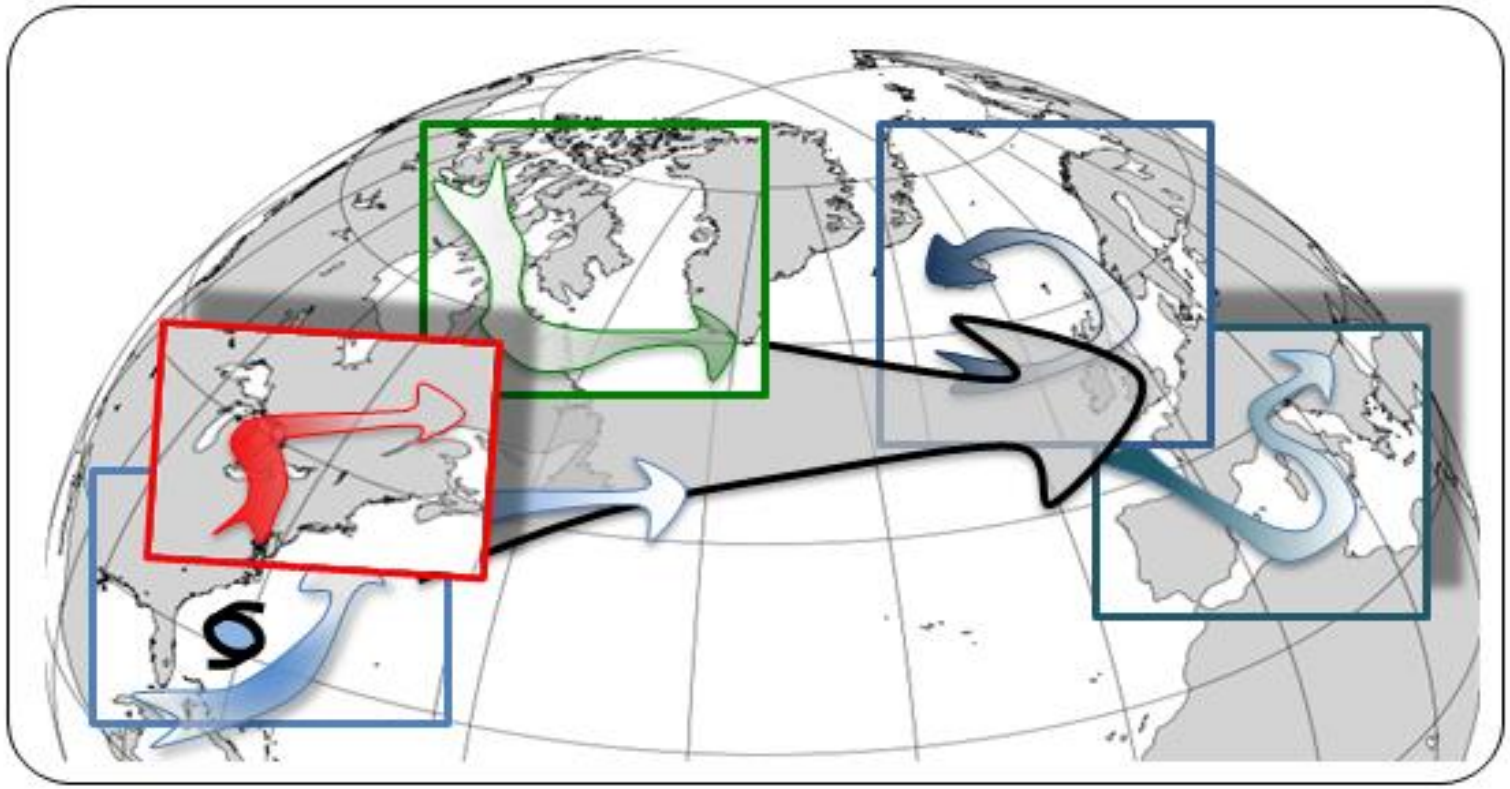
NAWDEX – General Planning Meeting

01 October 2016, Keflavik 11 UTC



NAWDEX – General Planning Meeting

01 October 2016, Keflavik 11 UTC

Key issues today

1. Saturday HALO flight cancelled
2. Sunday flights HALO, FALCON, SAFIRE
   - what if HALO cannot fly?
   - confirmation of general plans
3. Potential missions next week and down day options

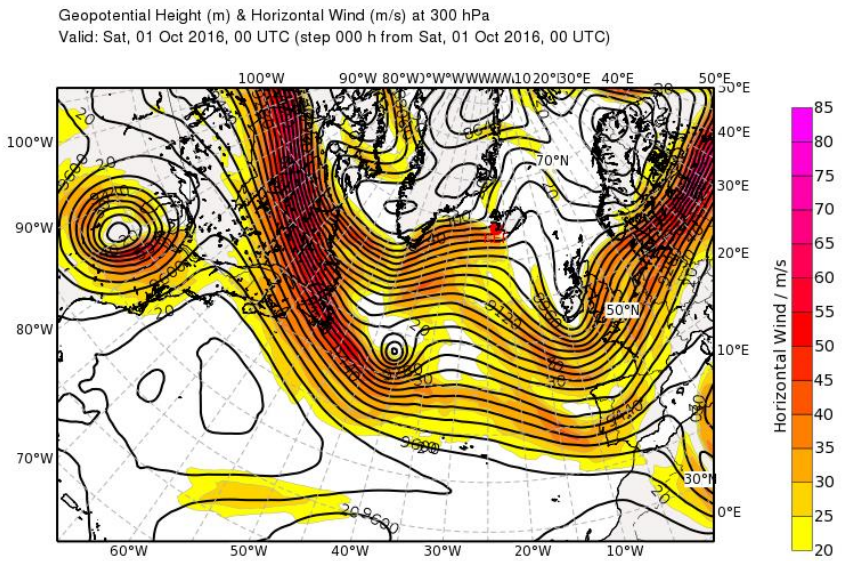
NAWDEX – General Planning Meeting

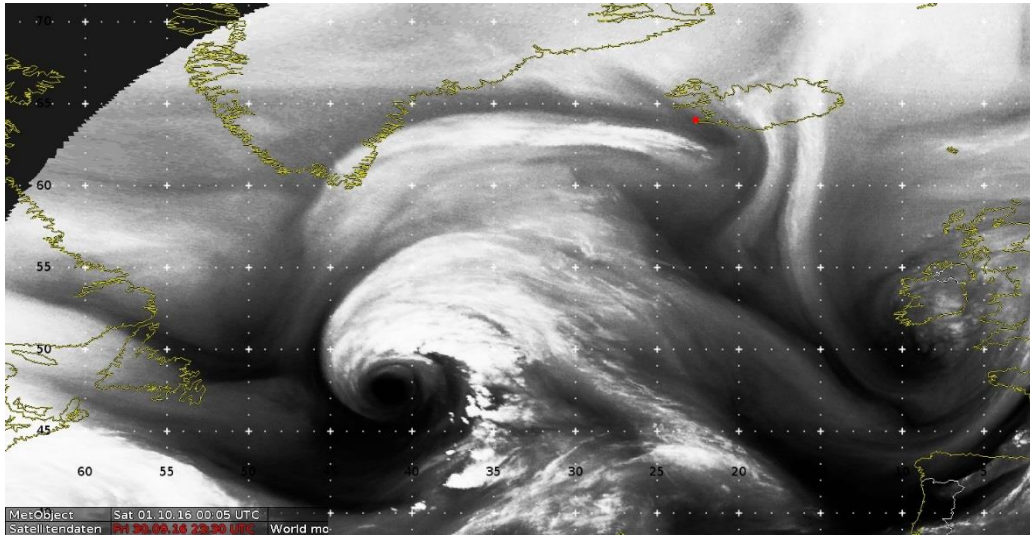
01 October 2016, Keflavik 11 UTC

1. Key information from previous flight (2 minutes)
2. Aircraft status report by FX-Operations
3. Instrument status report by Instrument Manager
4. Short weather summary: information about flight options for the next days and update for planning for the next day with the latest forecast
5. Final discussion about flight pattern for next day (in case of 2 options)
6. Report of Ground-Based Observation coordinator
7. Announcement of tentative plans for Day+3
8. Coordination with other aircraft (Input from other groups)

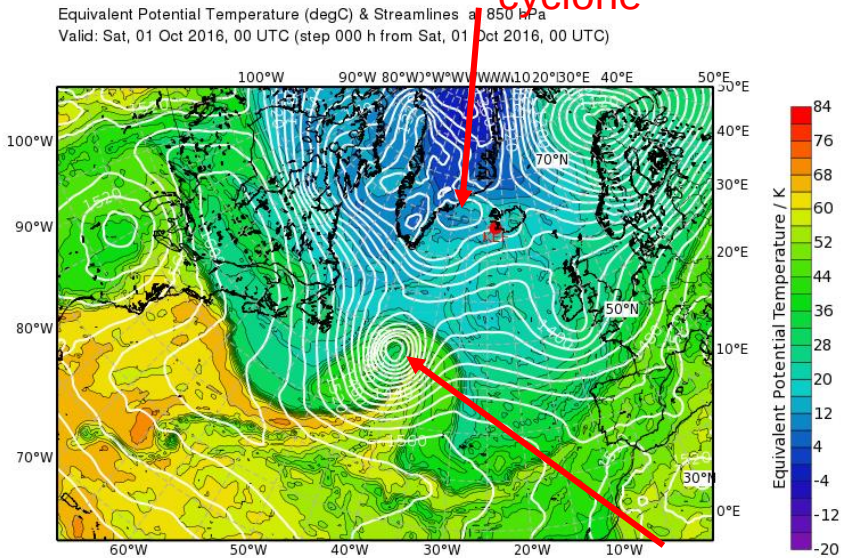
Analysis – 01 Oct 2016, 00 UTC

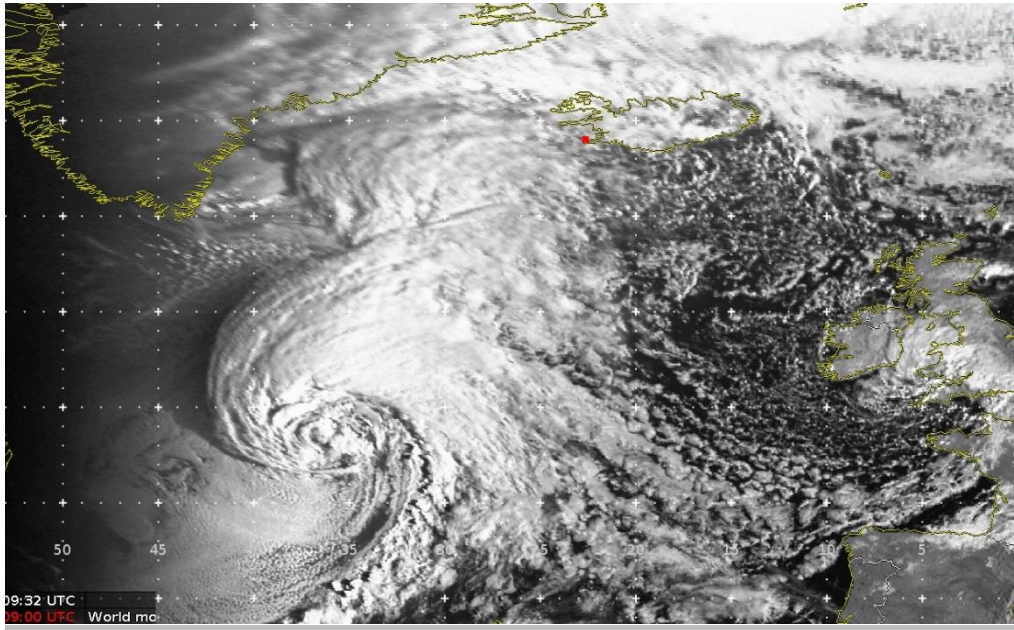
Z300, SAT WV
THE850, SAT VIS 9:15





Greenland lee cyclone

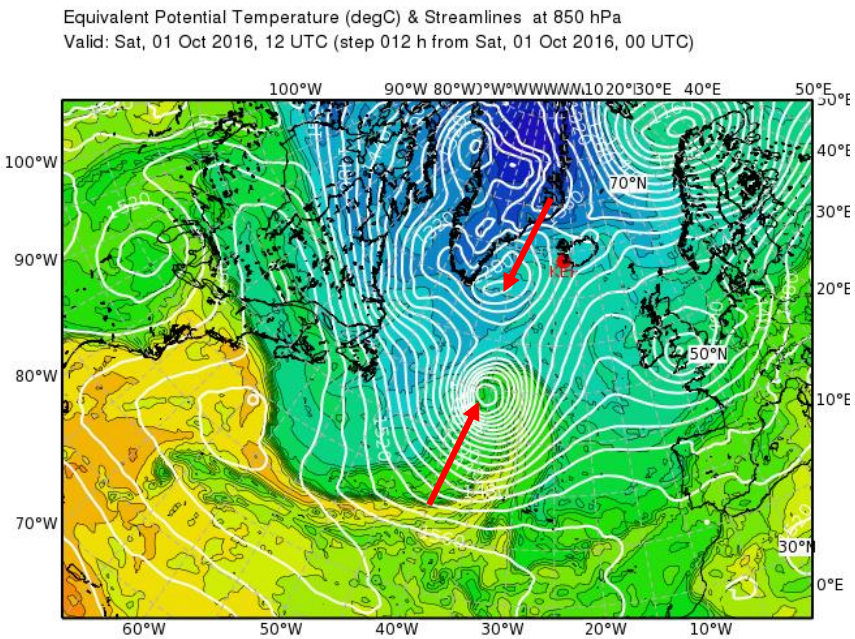


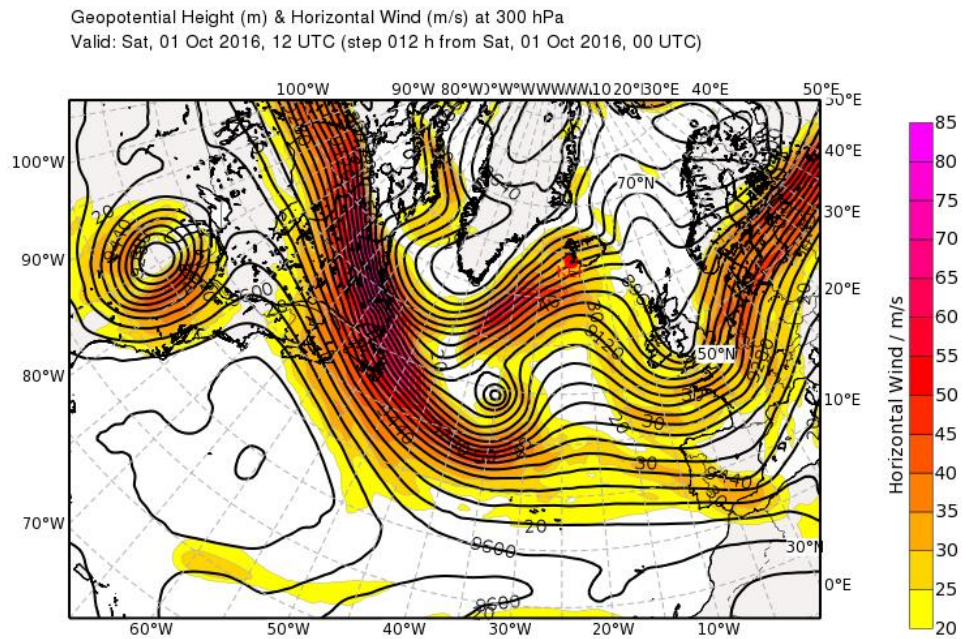


Saturday cyclone

Forecast for Sat 01 Oct 2016 12 UTC

THE850, Z300 **BT01/00Z**



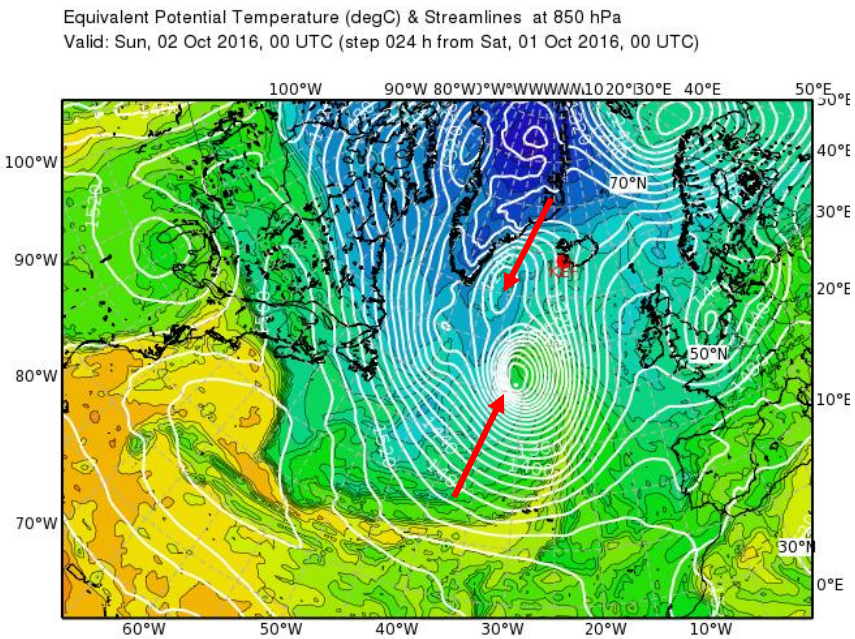


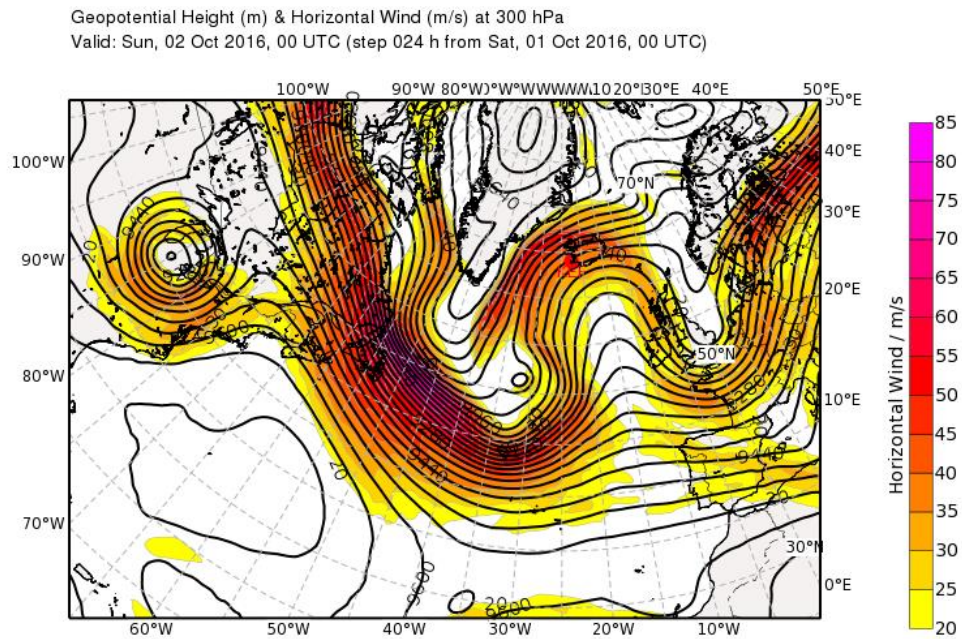
Saturday cyclone

Greenland lee cyclone

Forecast for Sun 02 Oct 2016 00 UTC

THE850, Z300 **BT01/00Z**



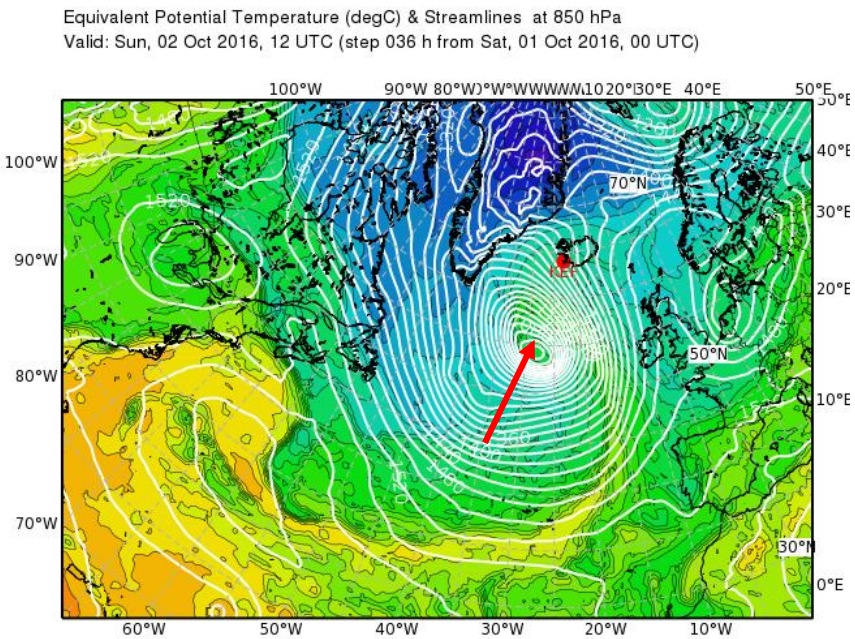


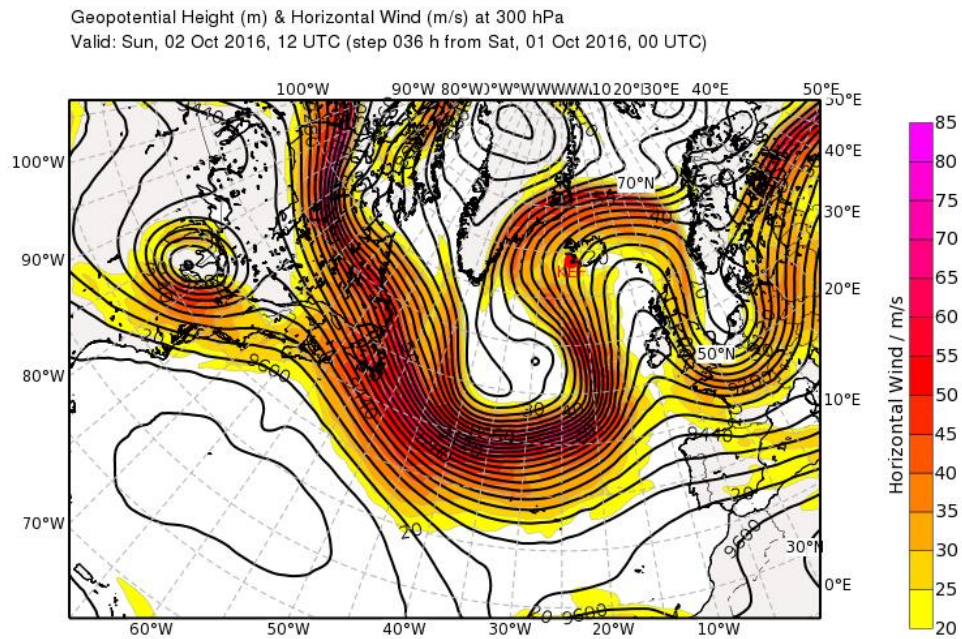
Saturday cyclone

Greenland lee cyclone

Forecast for Sun 02 Oct 2016 12 UTC

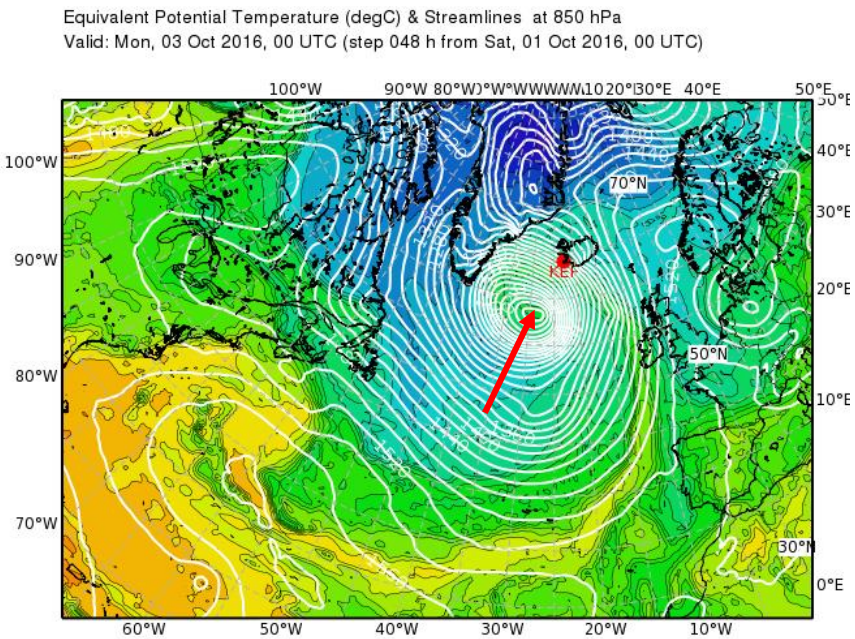
THE850, Z300 **BT01/00Z**

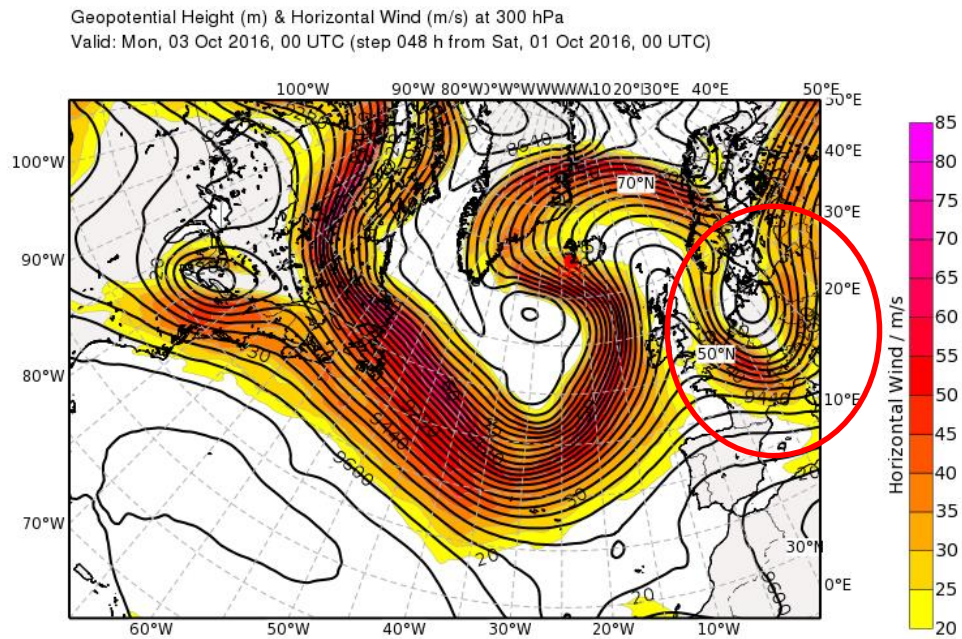




Forecast for Mon 03 Oct 2016 00 UTC

THE850, Z300 **BT01/00Z**

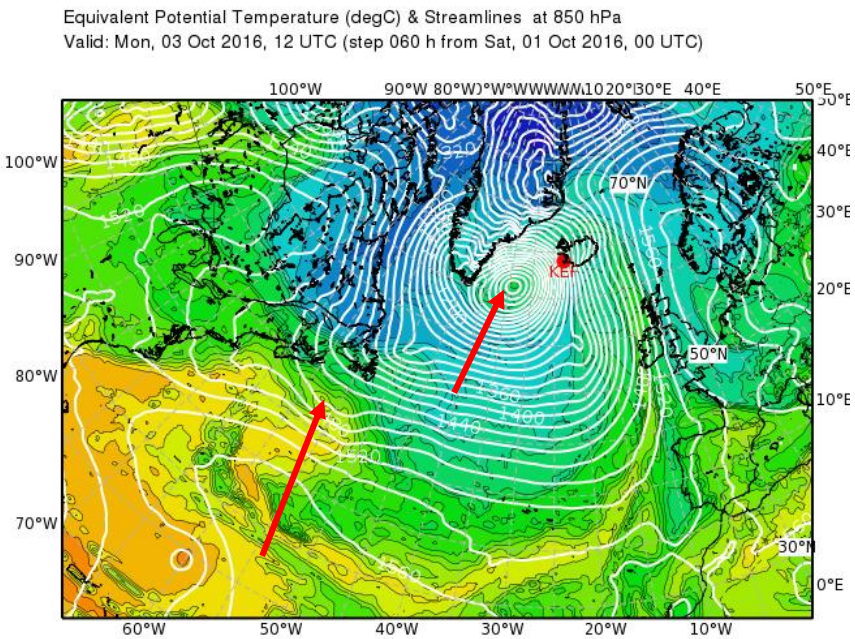


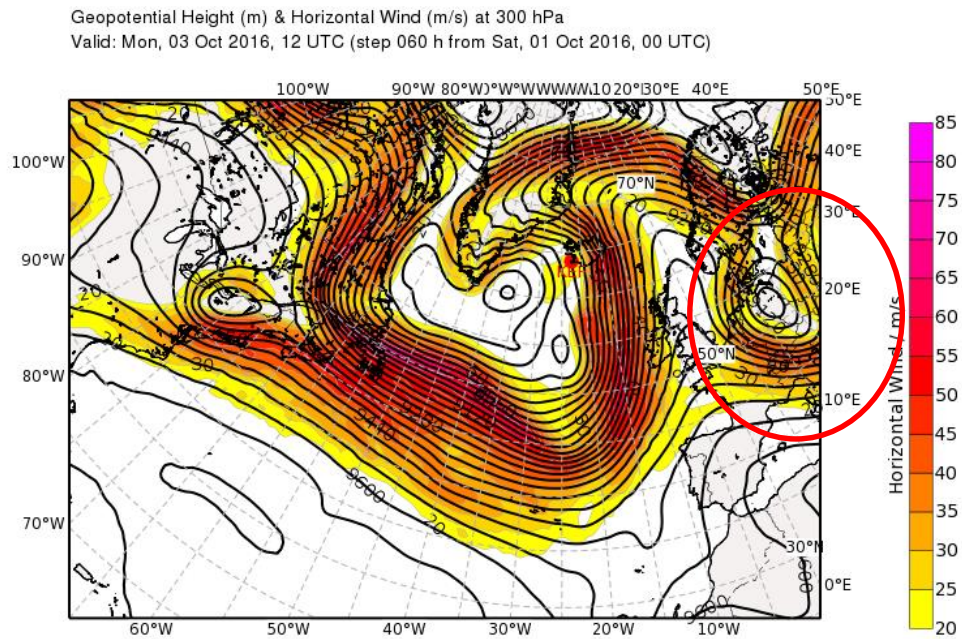


Saturday cyclone

Forecast for Mon 03 Oct 2016 12 UTC

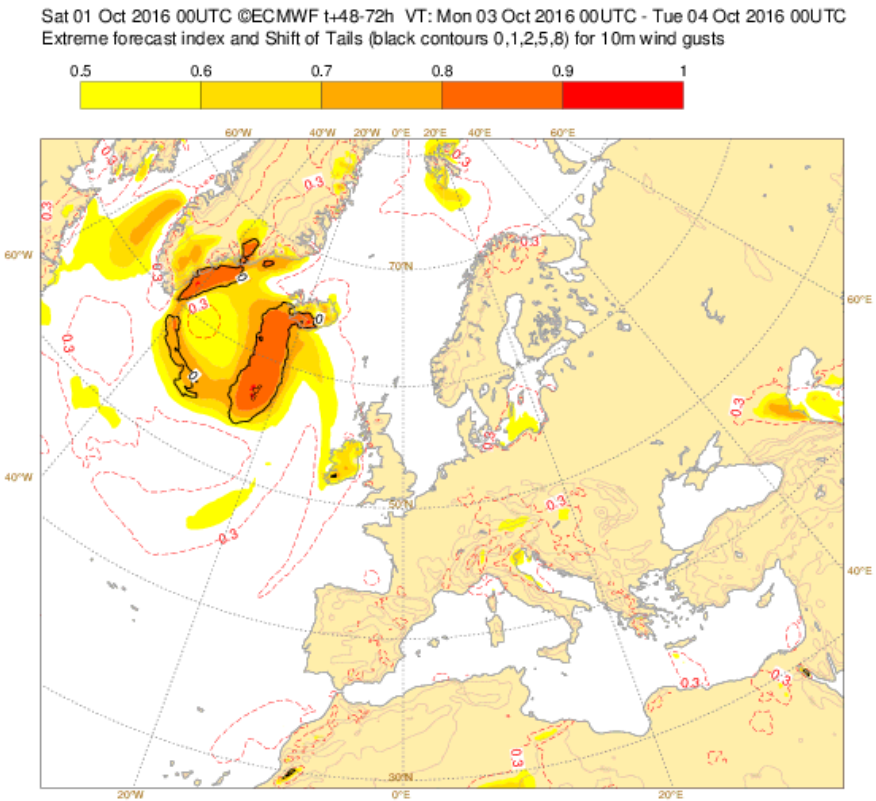
THE850, Z300 **BT01/00Z**

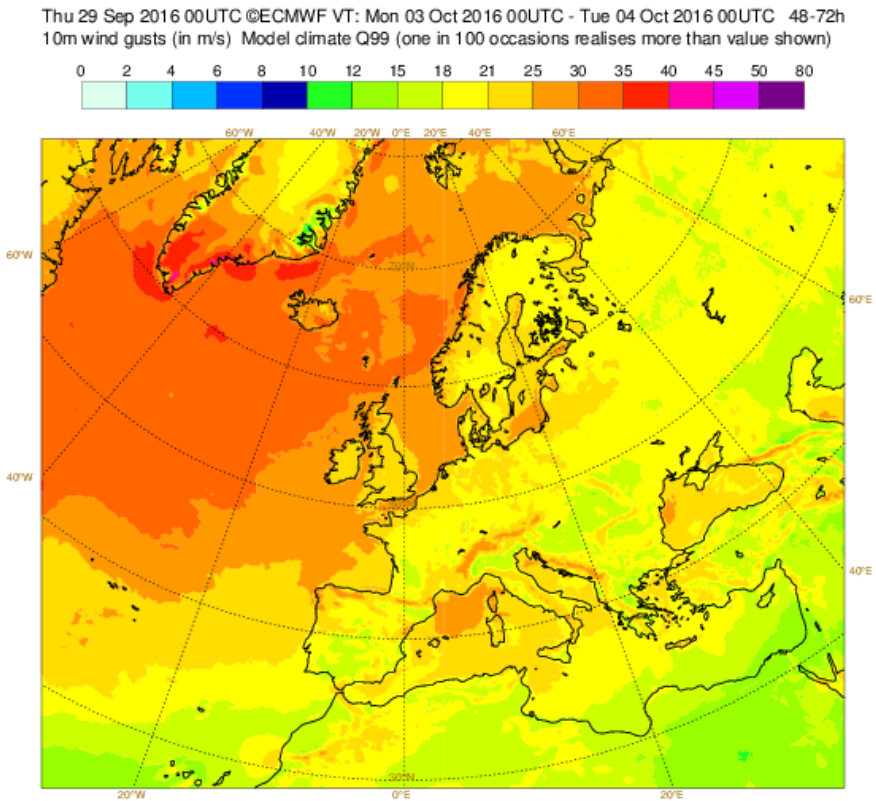




New frontal wave cyclone

EFI gusts for Monday (BT 01/00z)

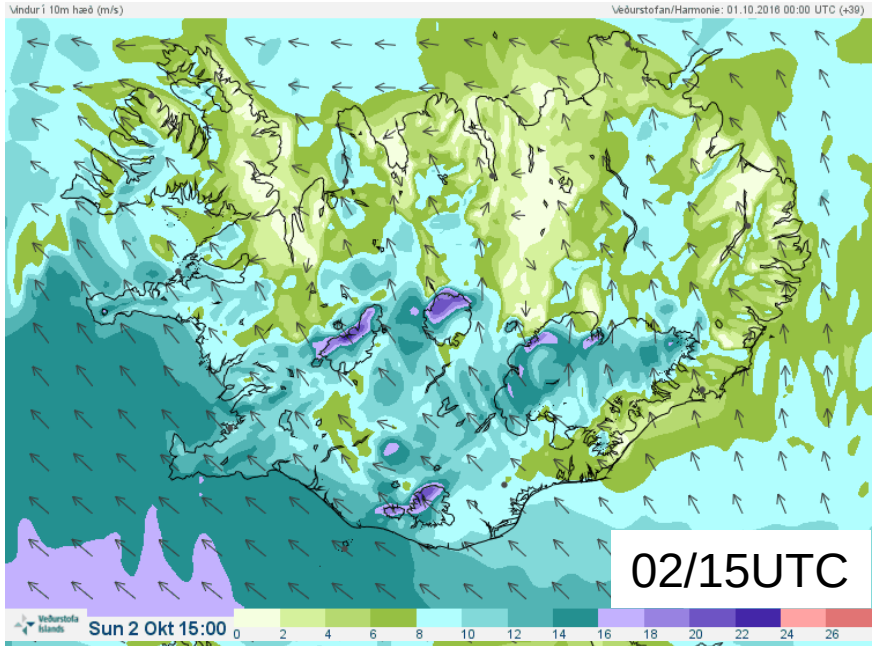


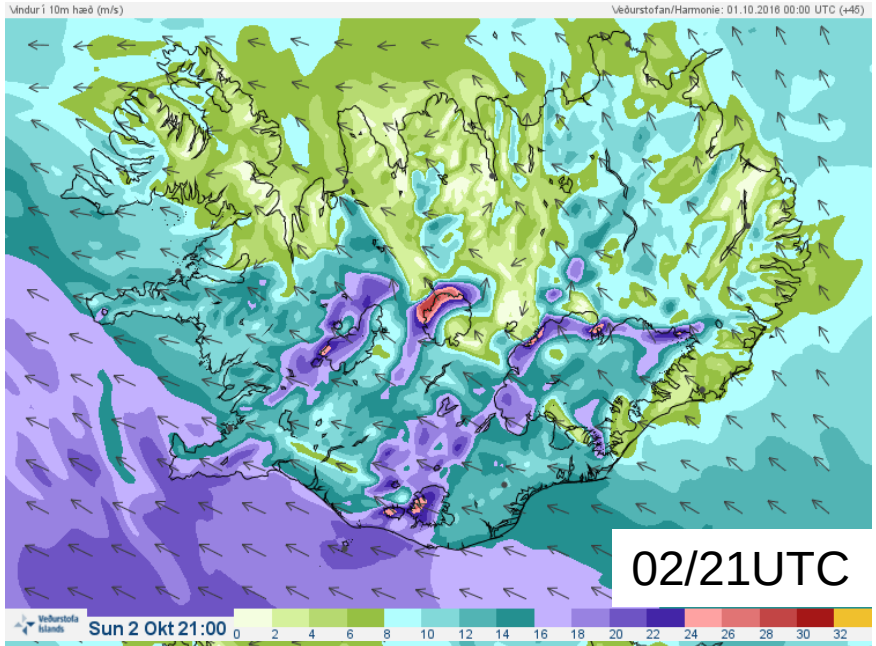


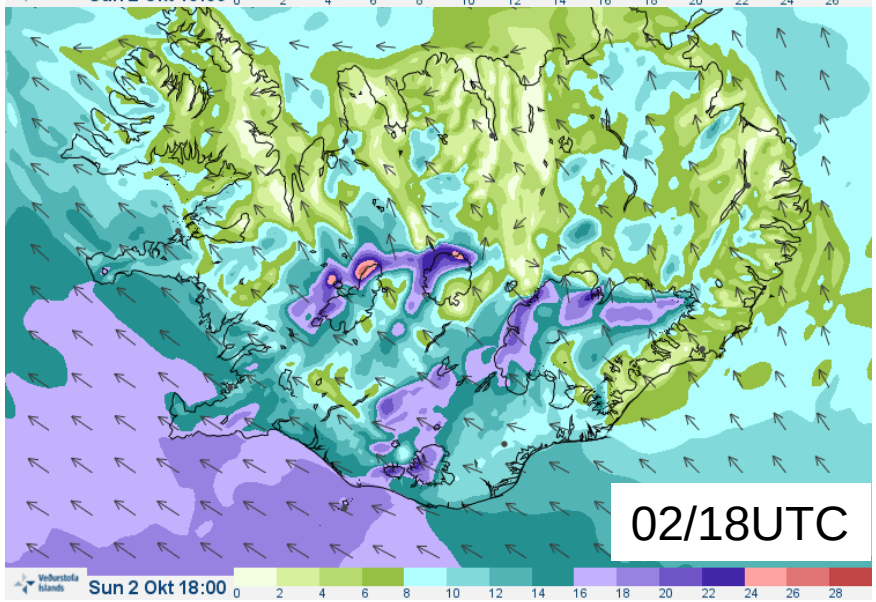
10m winds HARMONIE (2.5km) Sunday

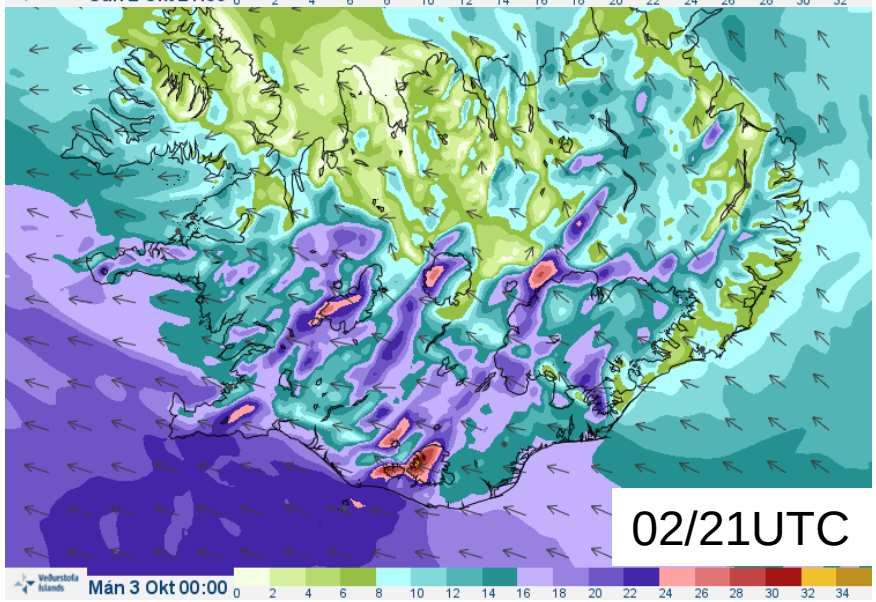
HARMONIE vedur.is BT 01/00Z

http://en.vedur.is/weather/forecasts/elements/#type=wind





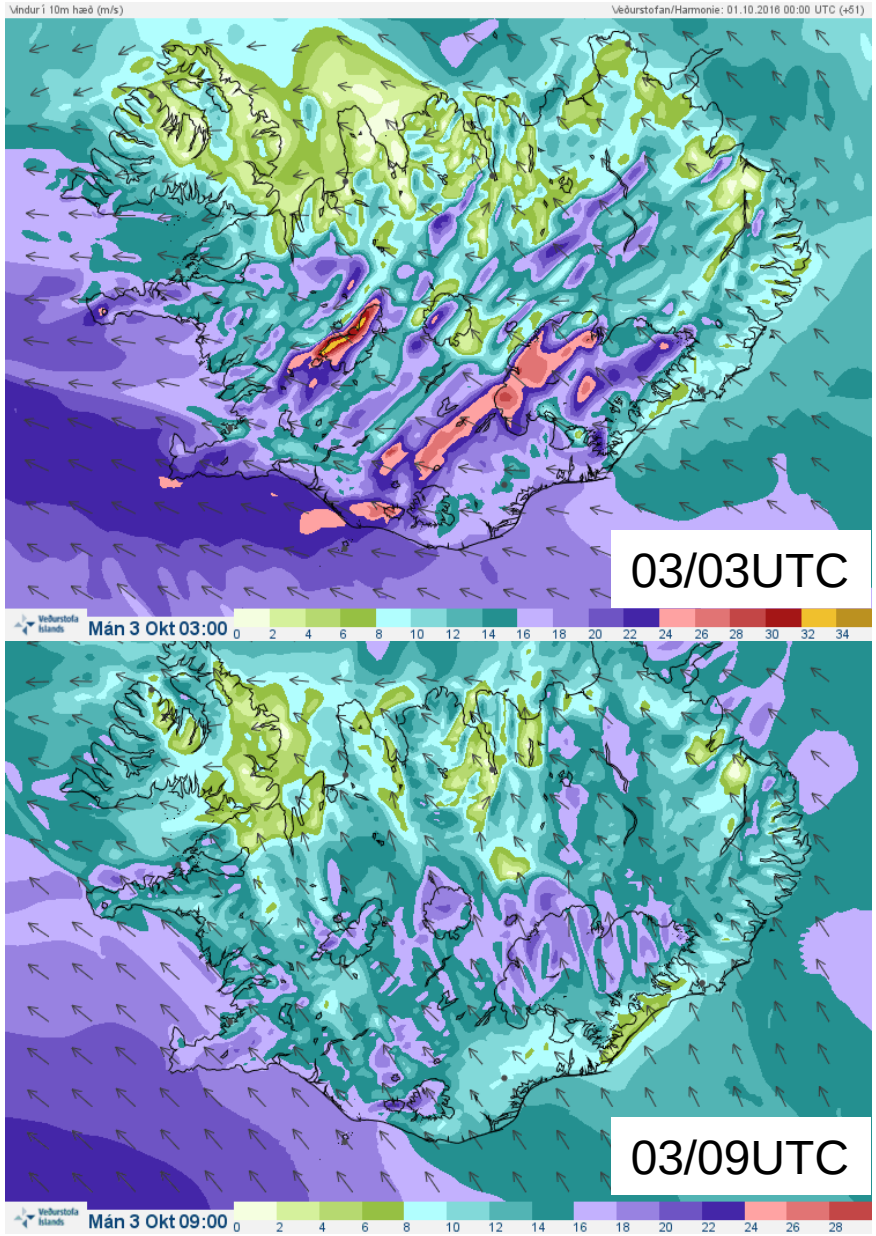


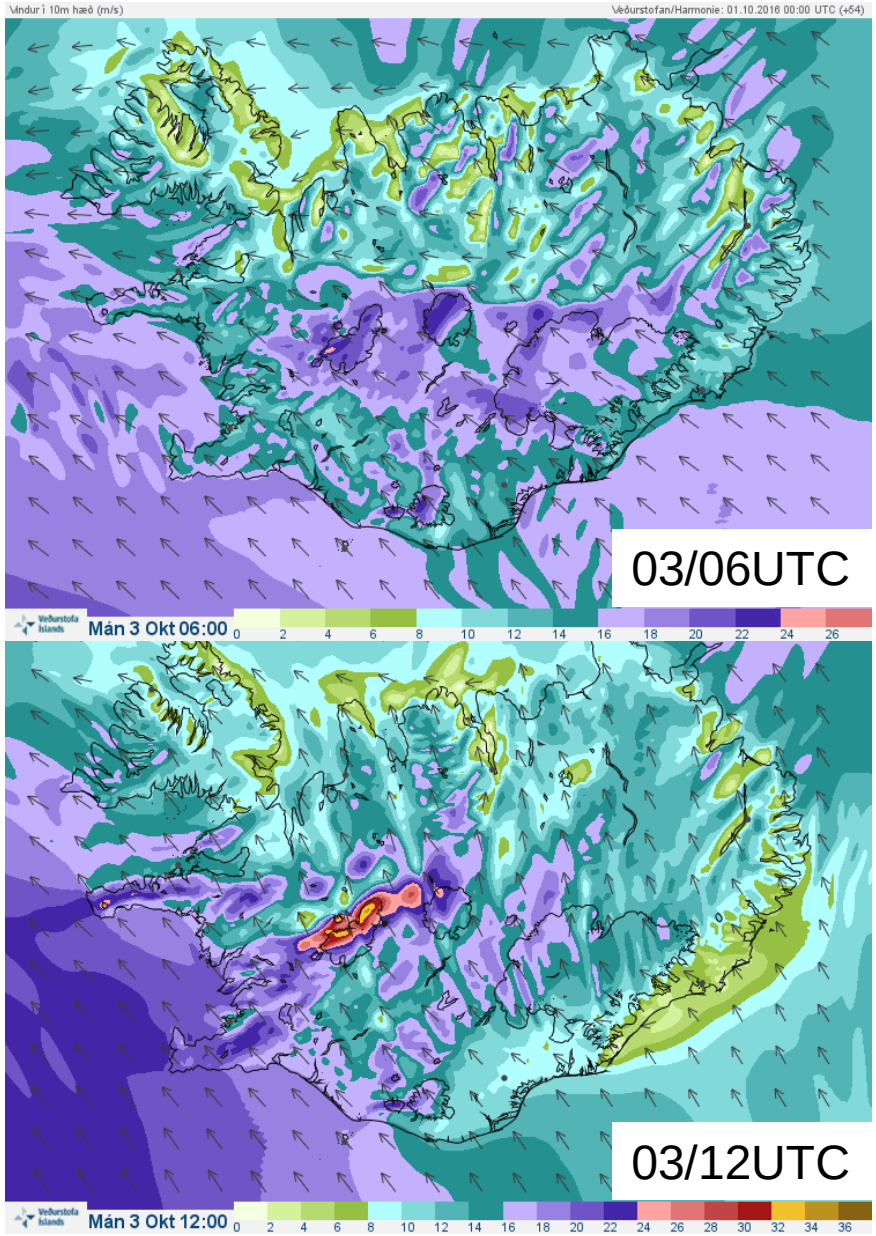


10m winds HARMONIE (2.5km) Monday

HARMONIE vedur.is BT 01/00Z

http://en.vedur.is/weather/forecasts/elements/#type=wind





10m winds HARMONIE (2.5km) Monday

HARMONIE vedur.is BT 01/00Z

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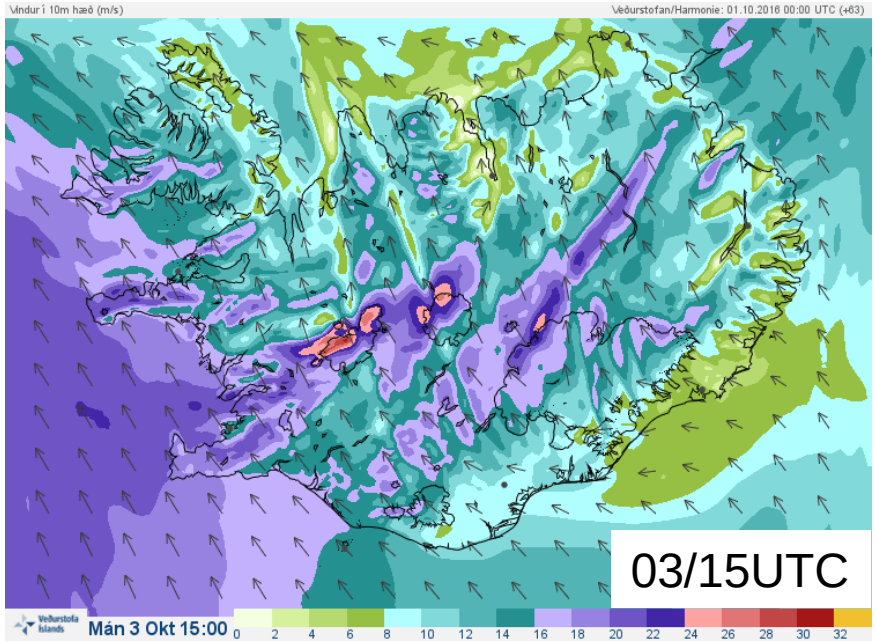
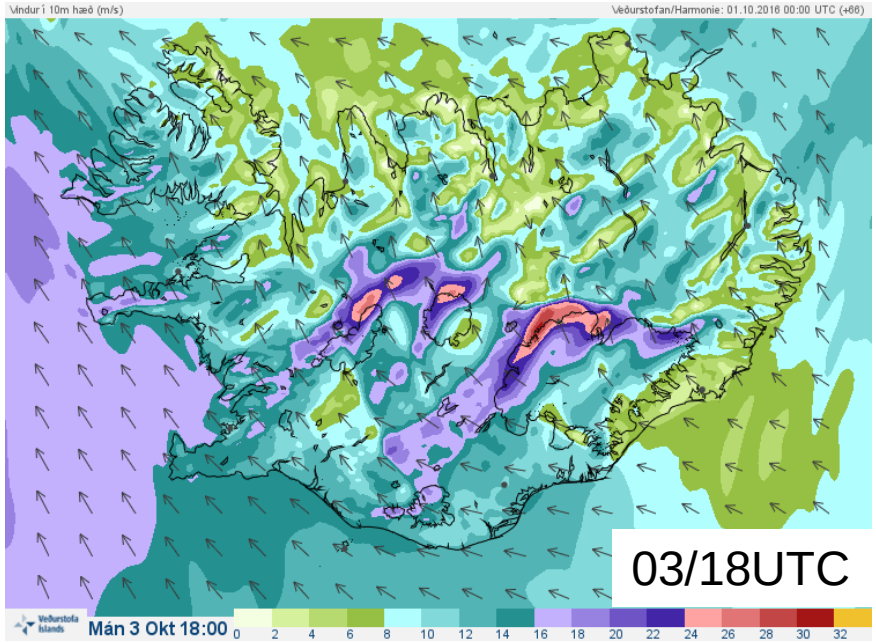




- Calmer conditions from Monday afternoon to Tuesday evening

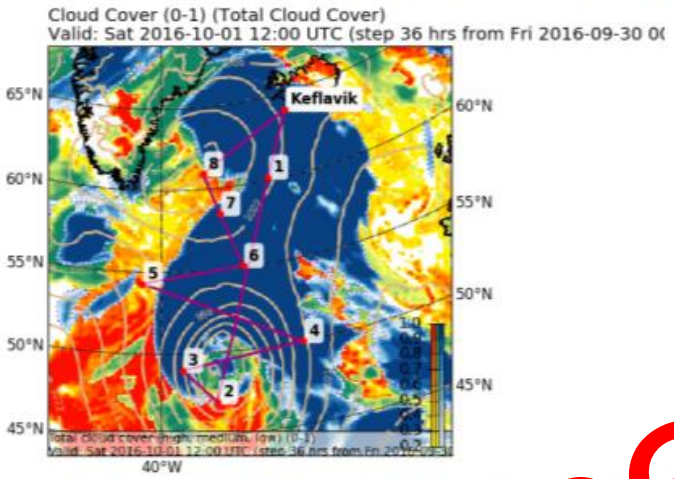
Saturday 1 October

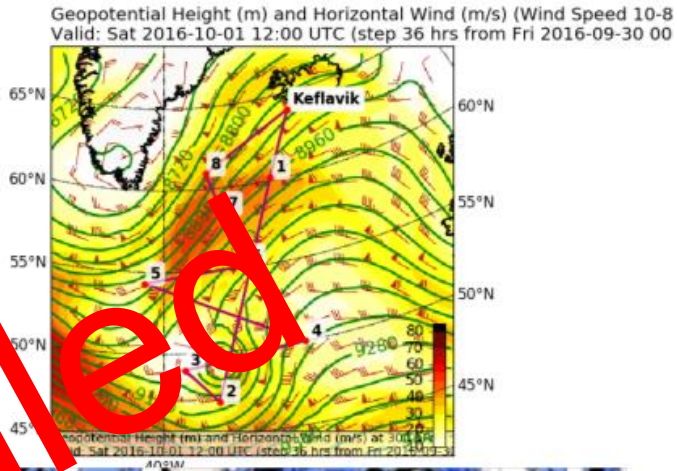
HALO flight

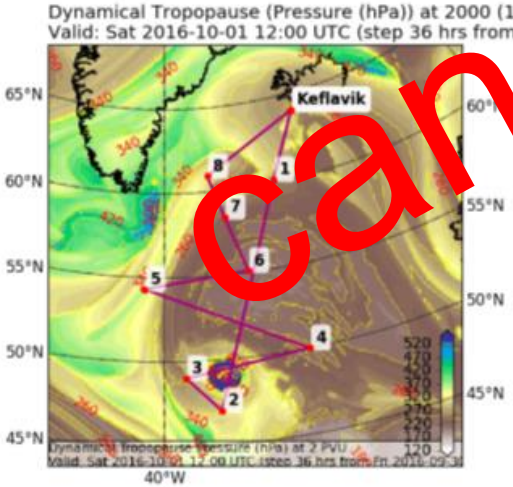
cancelled

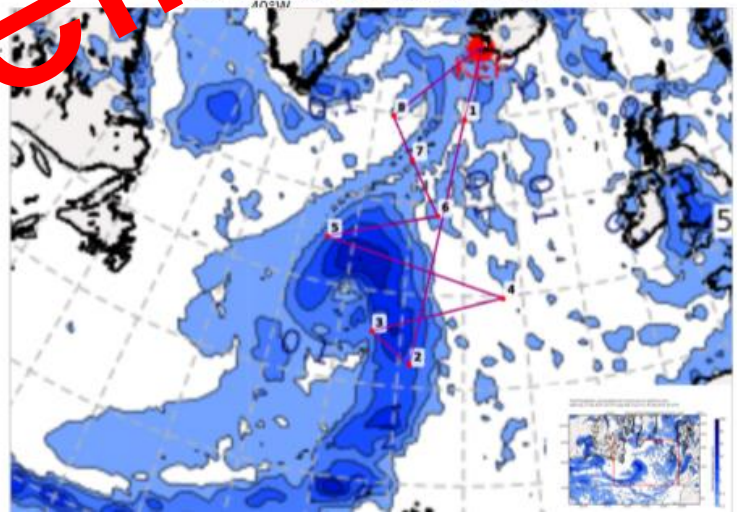
Saturday 1 October IOP6

Flight Plan for Sat (1. October)
Valid time: 12 UTC









cancelled

Sunday 2 October

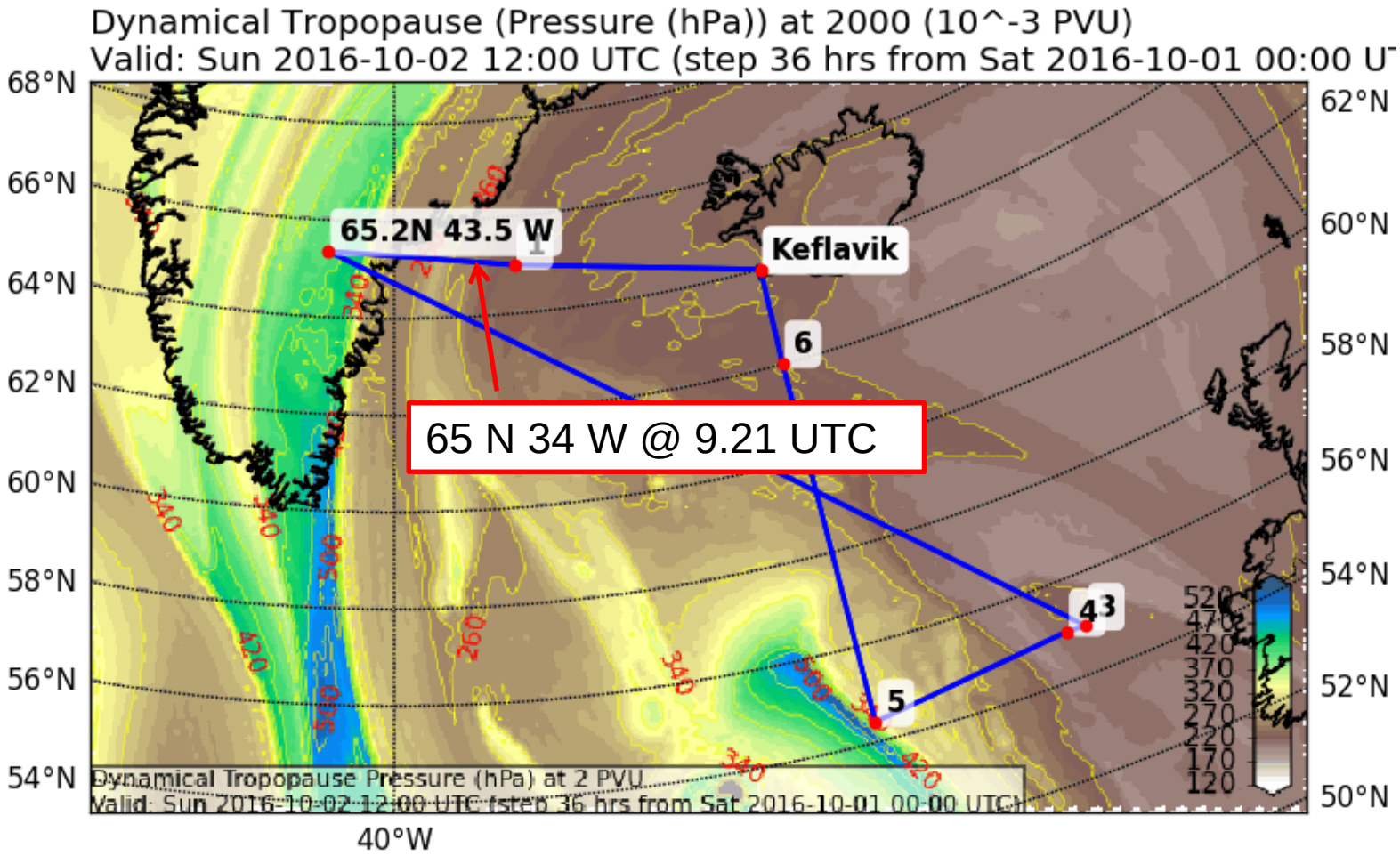
HALO, FALCON, SAFIRE flights

HALO, French- and DLR Falcon flights on Sunday 2 Oct

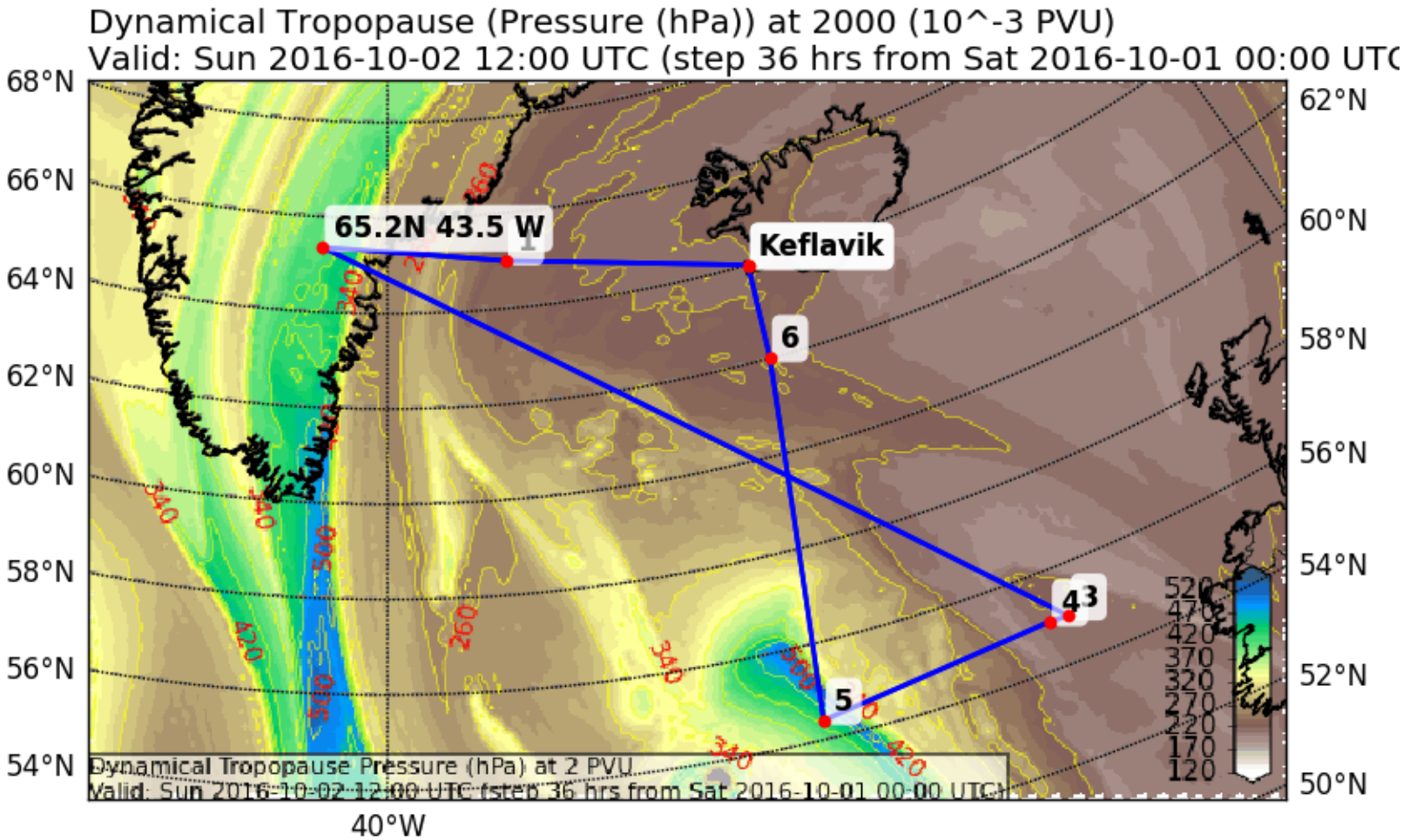
Take-off:

- DLR Falcon 8:20 UTC
- French Falcon 8:30 UTC
- Halo 8:40 UTC

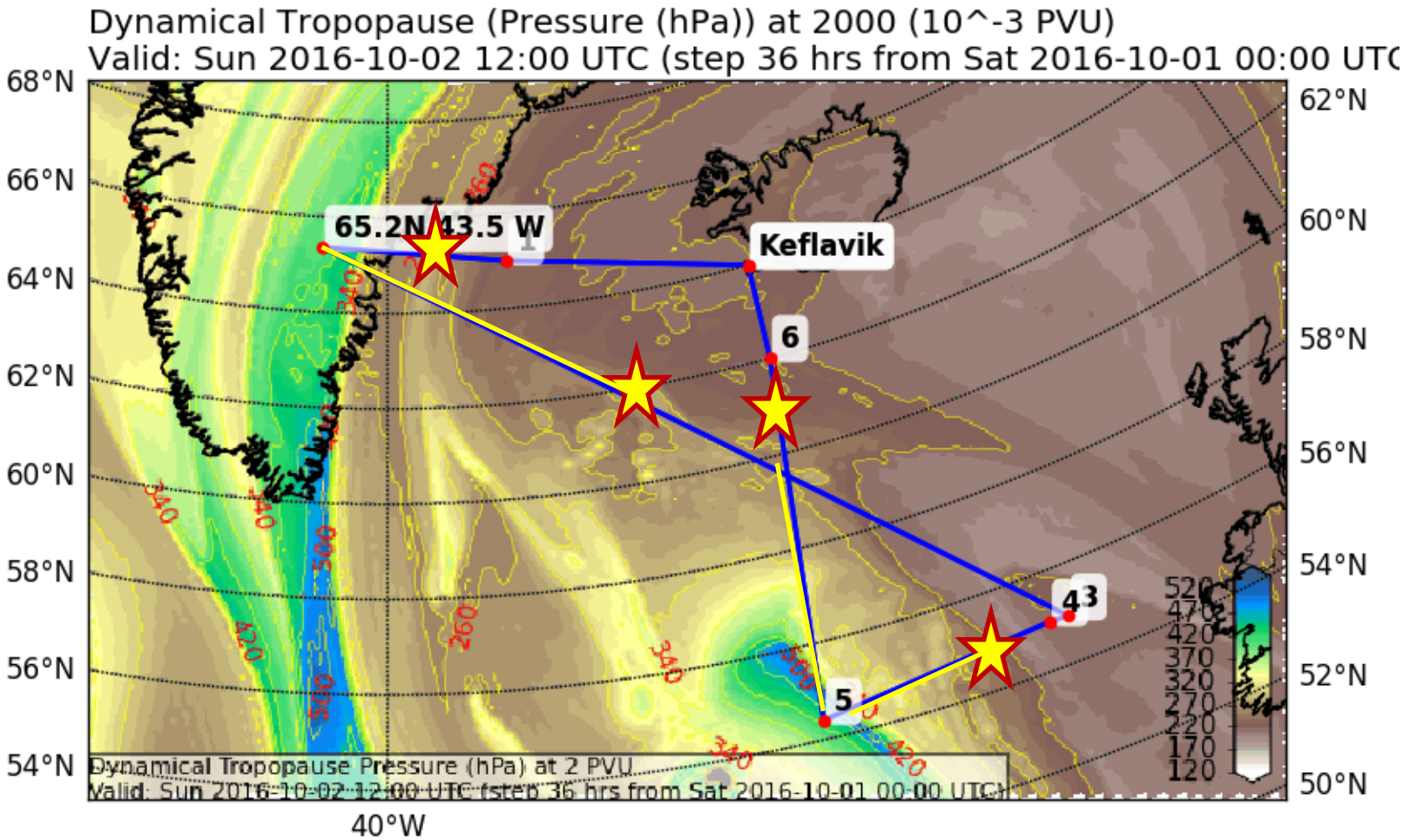
Sunday HALO flight



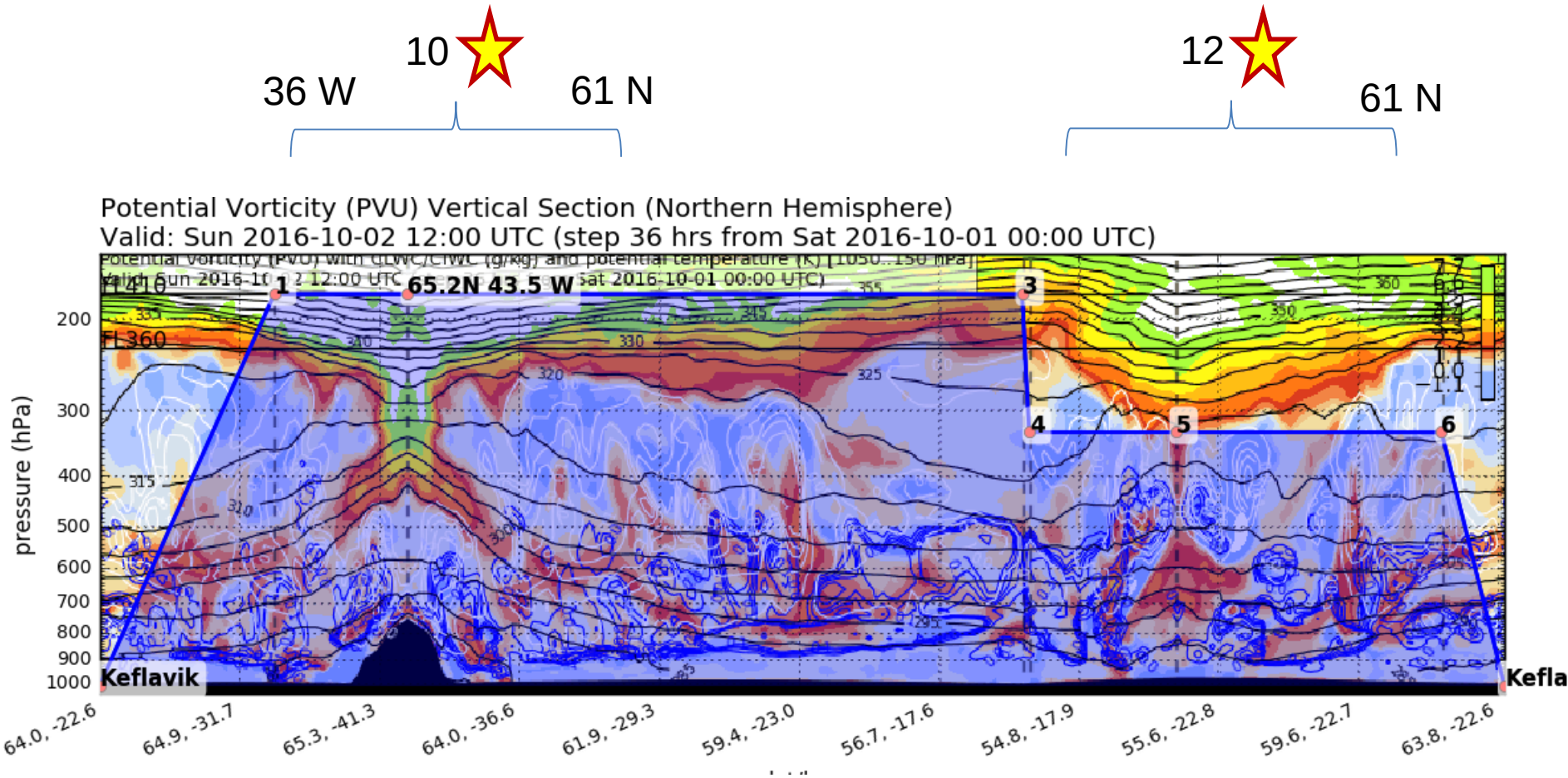
Sunday HALO flight



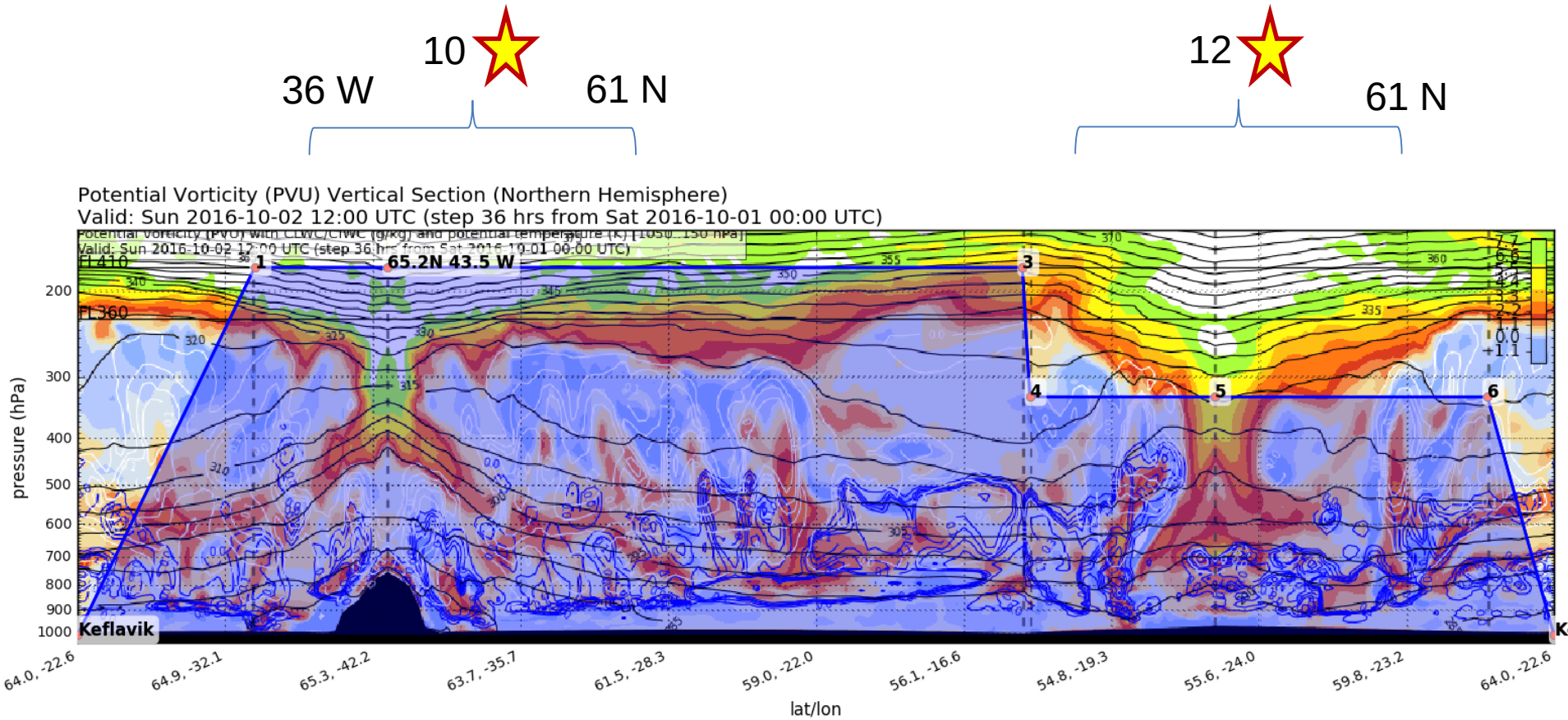
Sunday HALO flight - dropsondes



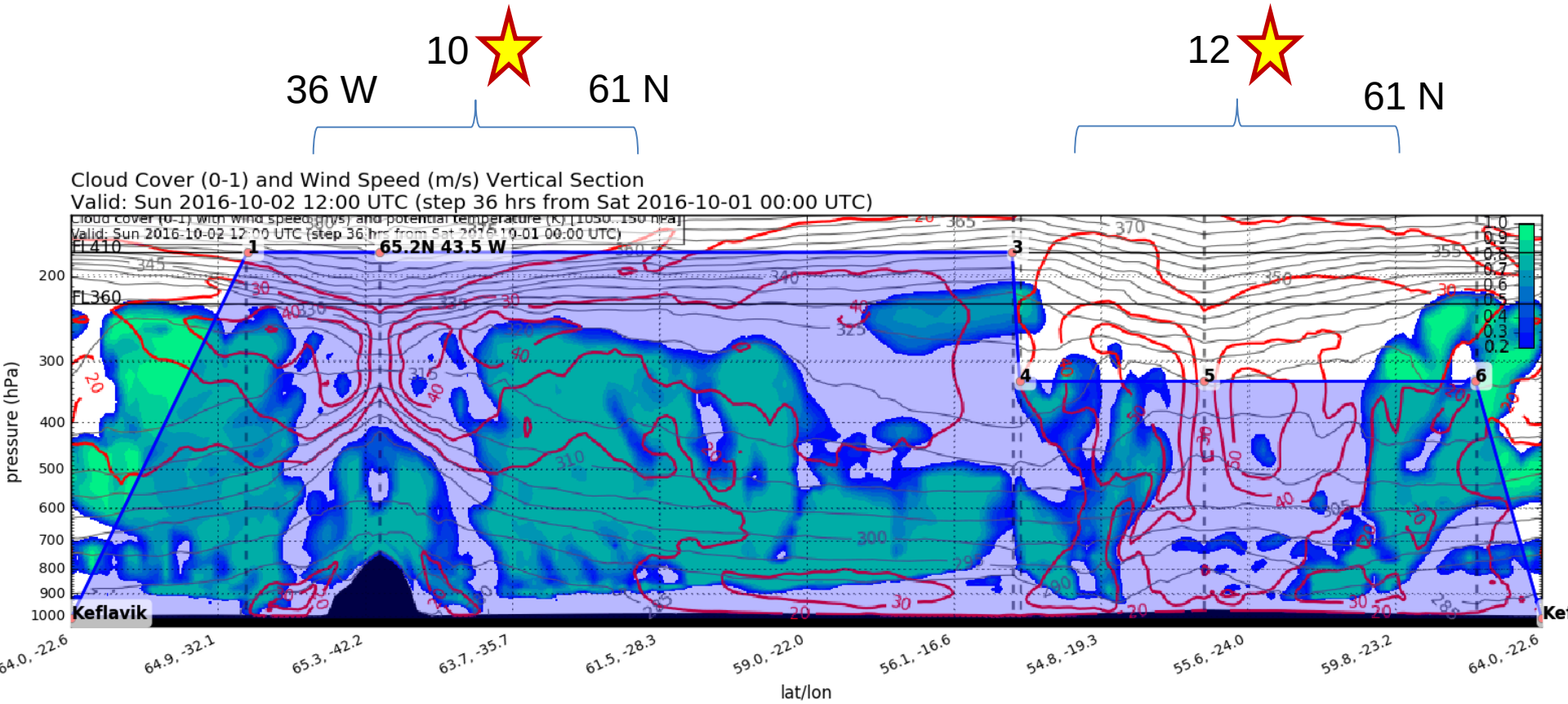
Sunday HALO flight - dropsondes



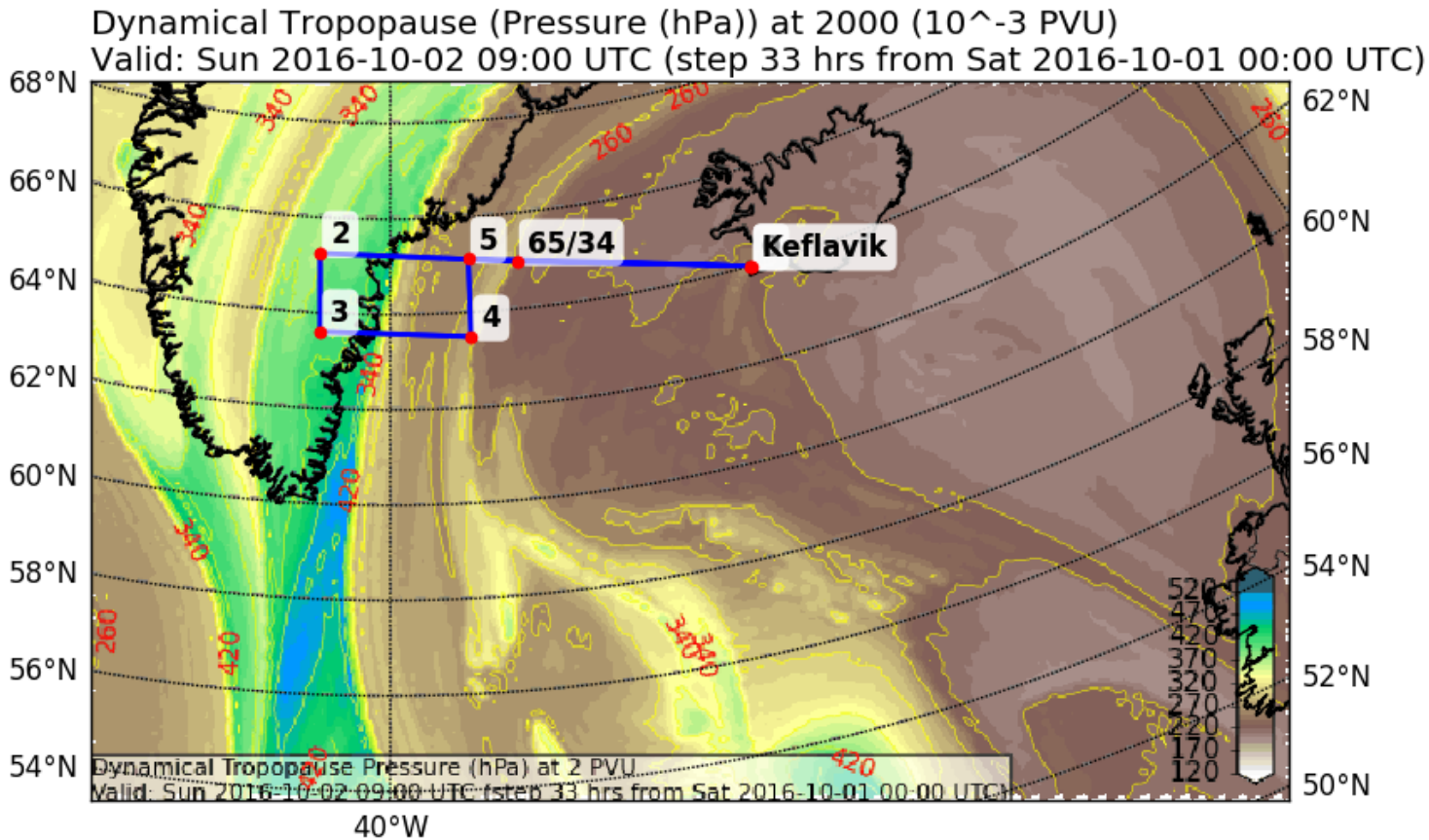
Sunday HALO flight - dropsondes



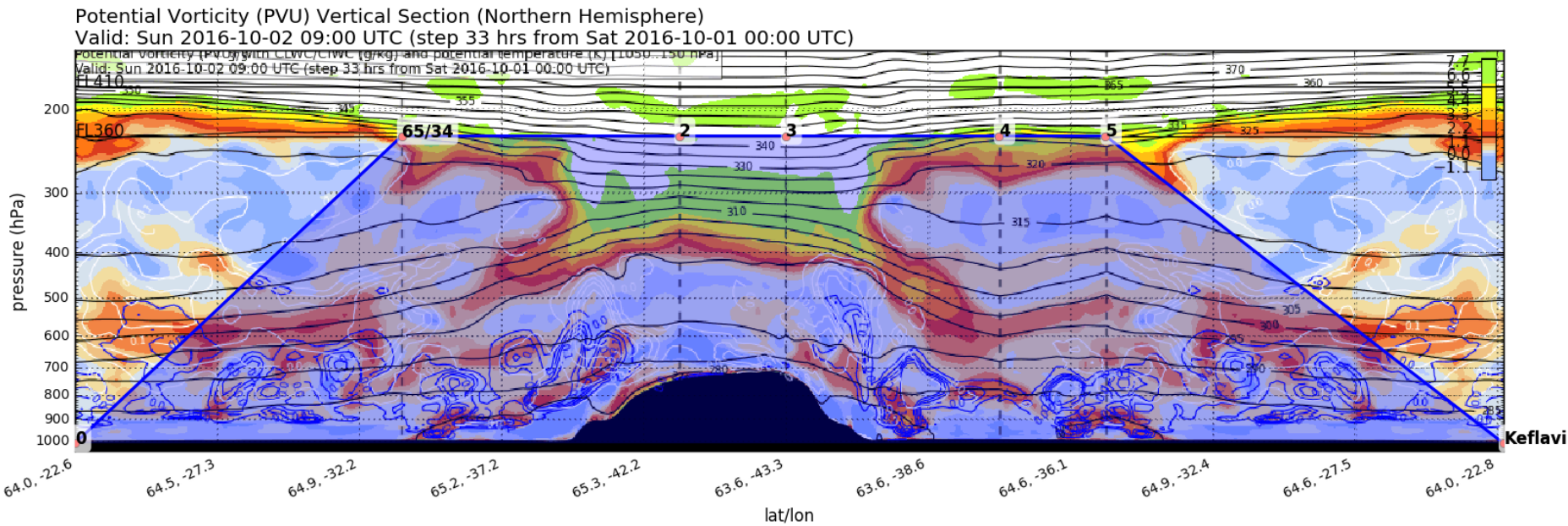
Sunday HALO flight - dropsondes



IOP6: Falcons flight

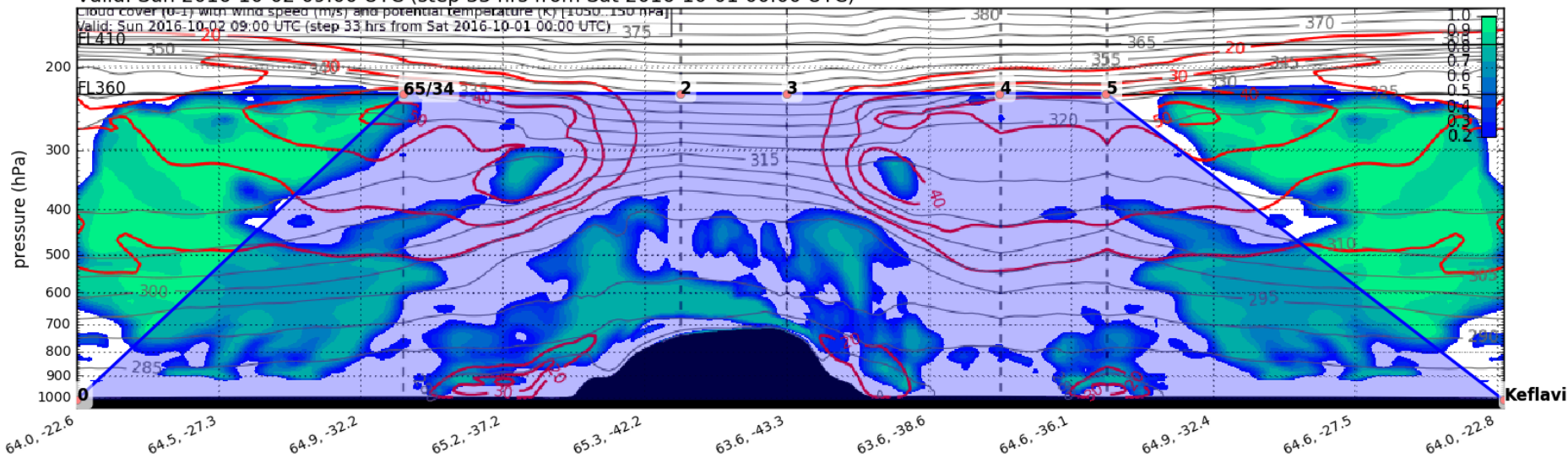


Sunday Falcons flight

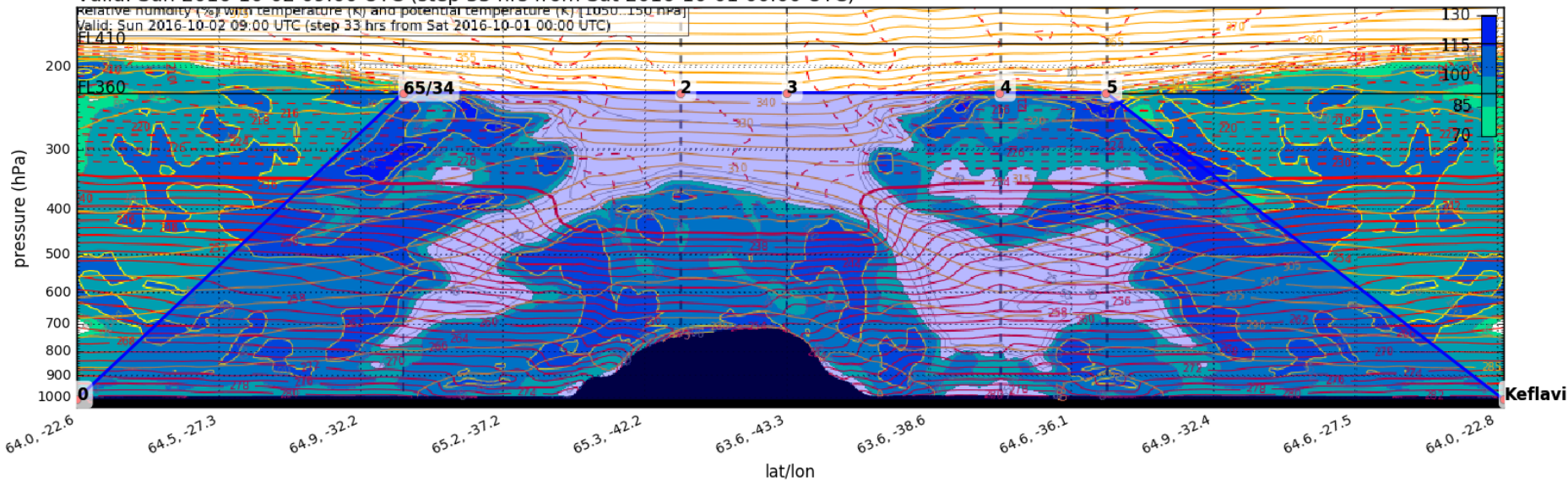


Sunday Falcons flight

Cloud Cover (0-1) and Wind Speed (m/s) Vertical Section
Valid: Sun 2016-10-02 09:00 UTC (step 33 hrs from Sat 2016-10-01 00:00 UTC)

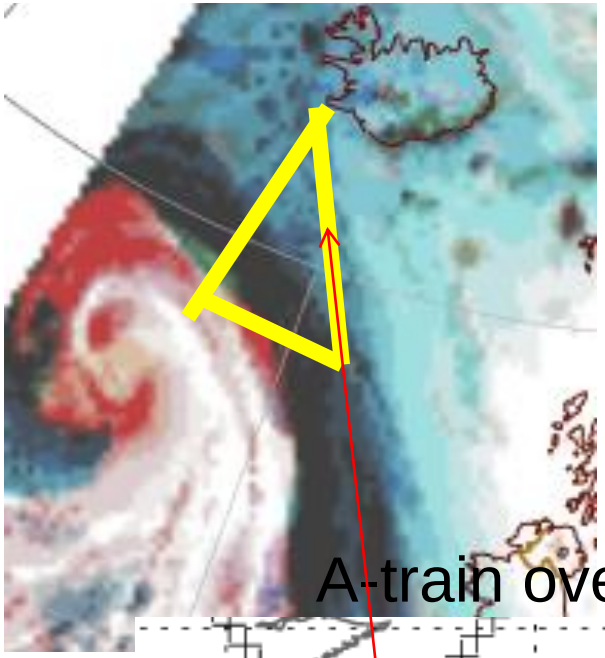


Relative Humdity (%) Vertical Section
Valid: Sun 2016-10-02 09:00 UTC (step 33 hrs from Sat 2016-10-01 00:00 UTC)

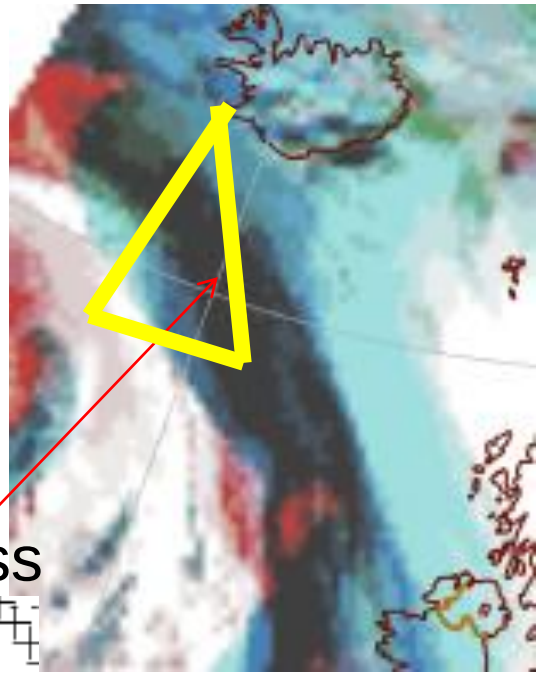


Second flight of SAFIRE French Falcon on Sunday afternoon

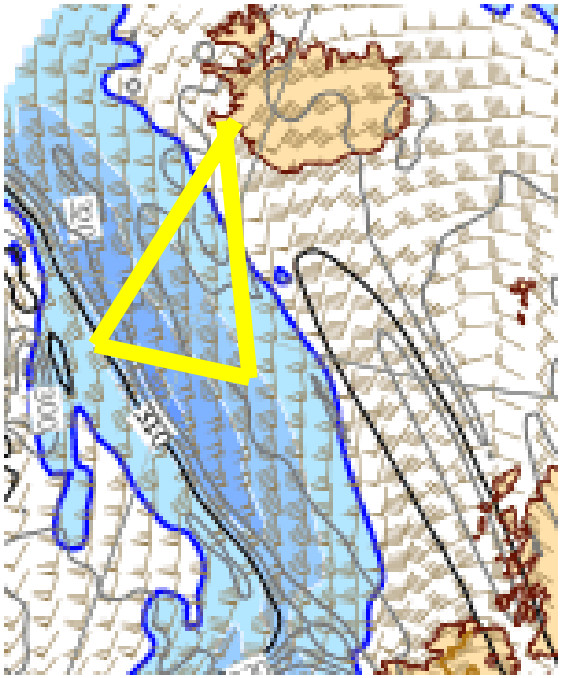
Cloud cover 2 Oct 12UTC



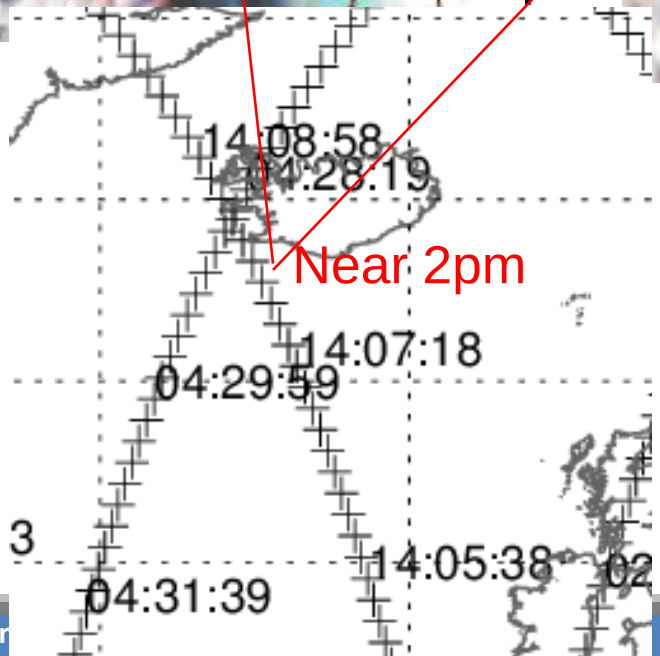
Cloud cover 2 Oct 18UTC



Jet at 1.5 PVU

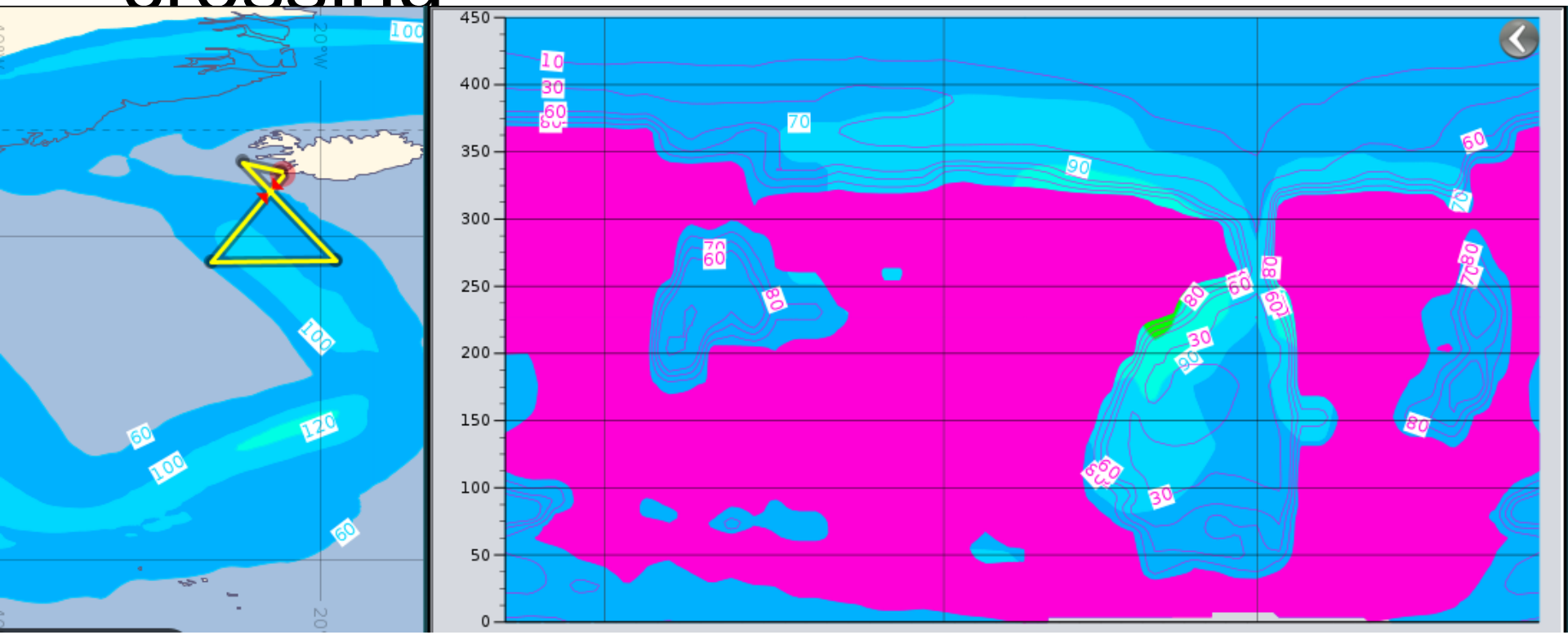


A-train overpass



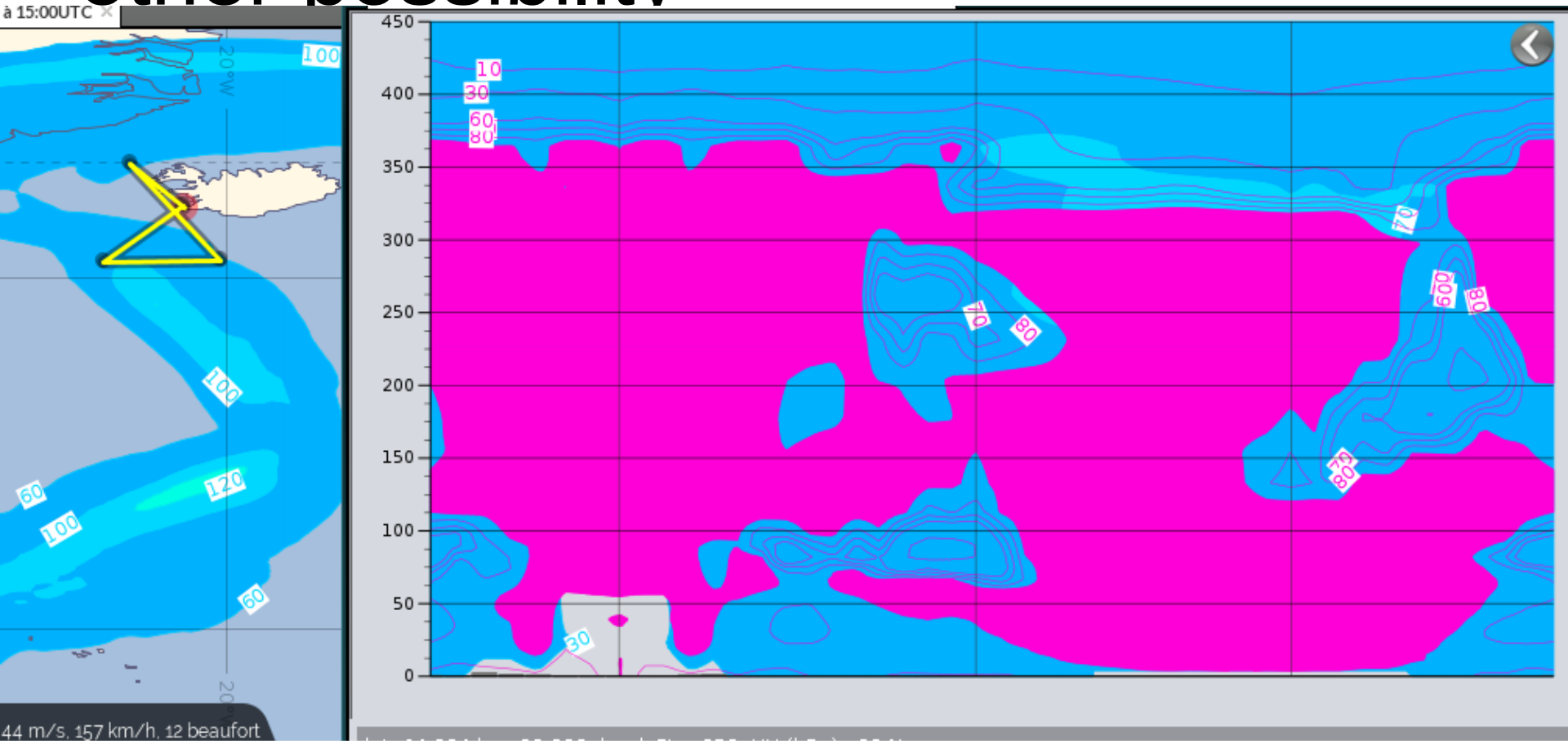
- Overpass of A-train near 2pm / mainly deep clouds
- Then crossing PV gradient /jet twice.

SAFIRE Falcon: Sunday Second flight: A-train Overpass + jet crossing



- Blue: wind speed at 300 hPa
- Pink: RH > 80%

SAFIRE Falcon: Sunday 2nd flight: other possibility

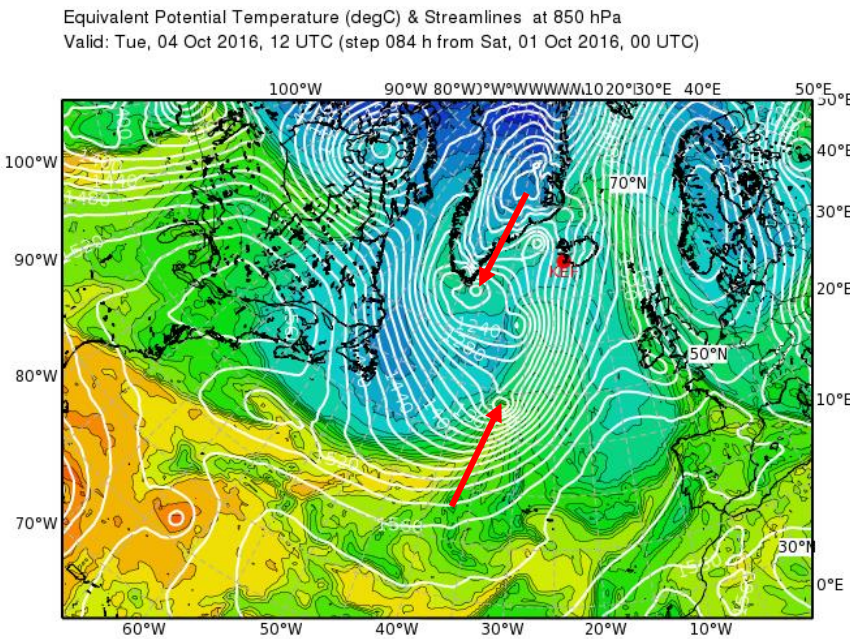


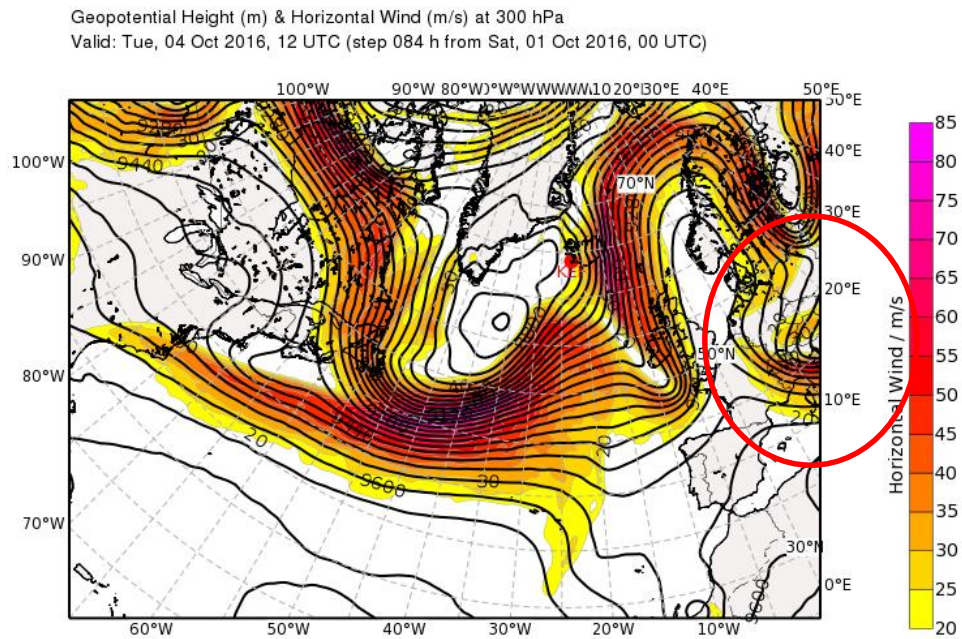
Radiosoundings

Outlook

Forecast for Tue 04 Oct 2016 12 UTC

THE850, Z300 **BT01/00Z**

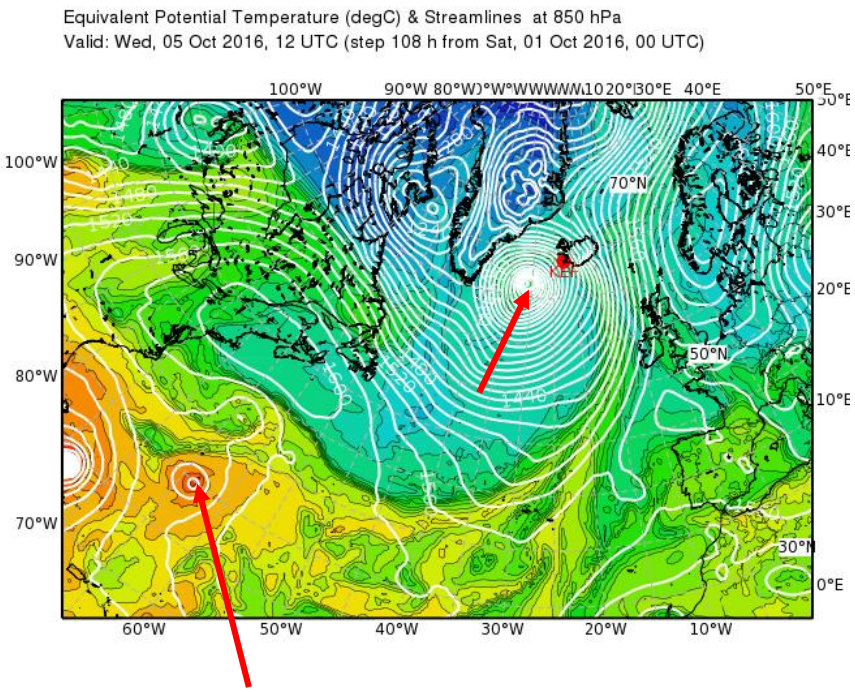


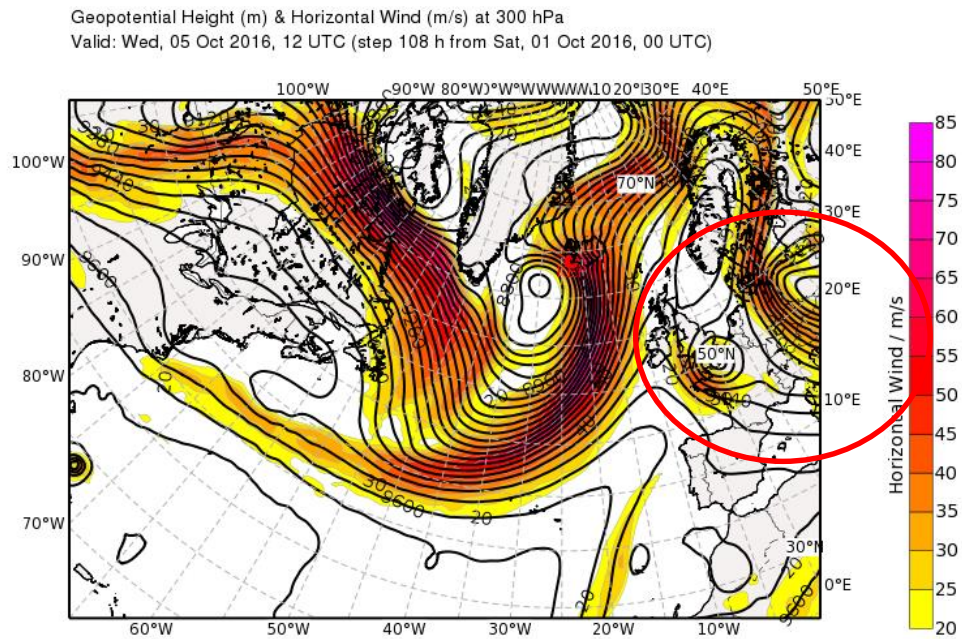


Frontal wave cyclone

Forecast for Wed 05 Oct 2016 12 UTC

THE850, Z300 **BT01/00Z**



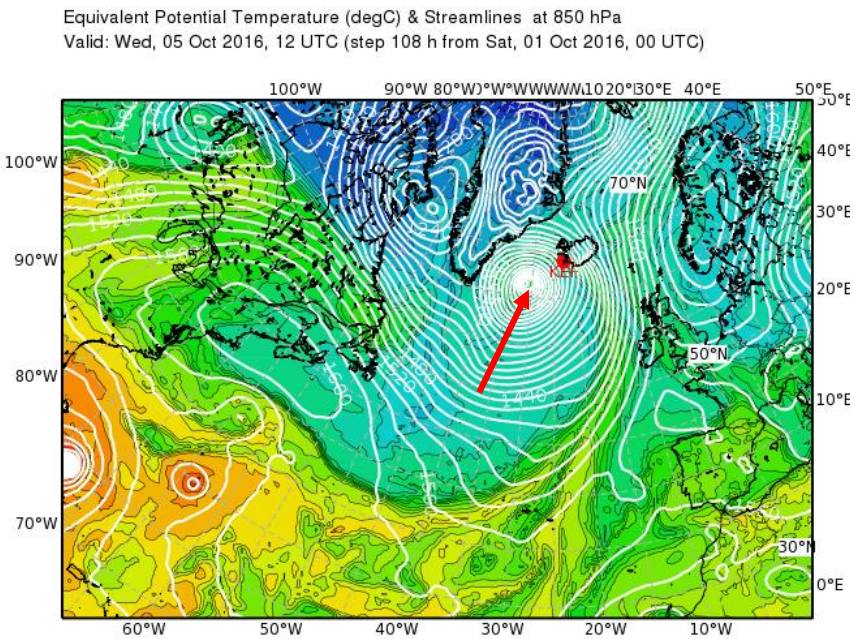


new subtropical cyclone

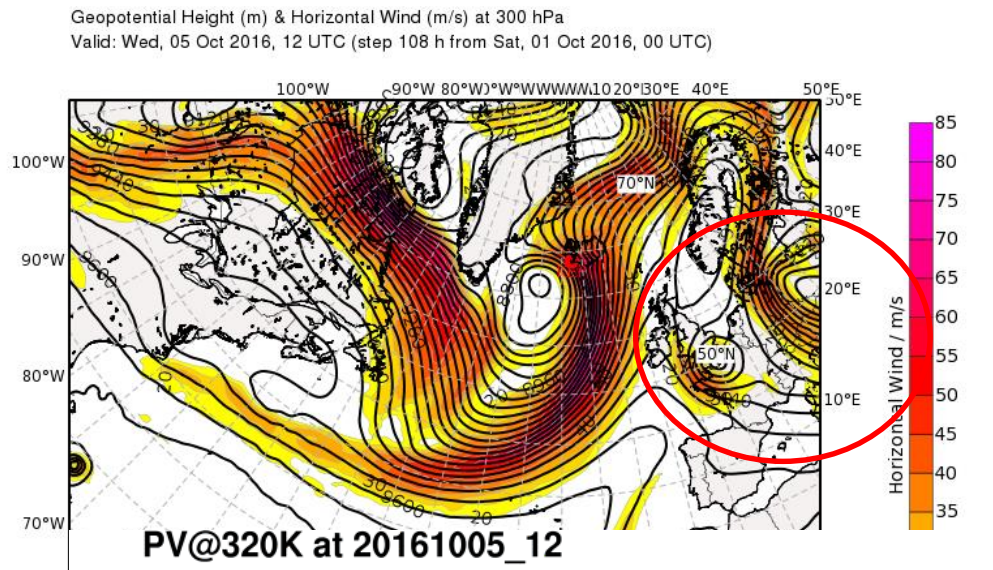
- Cut-off formation over Europe
- Similar cyclogenesis in sub-tropical air as Saturday cyclone?

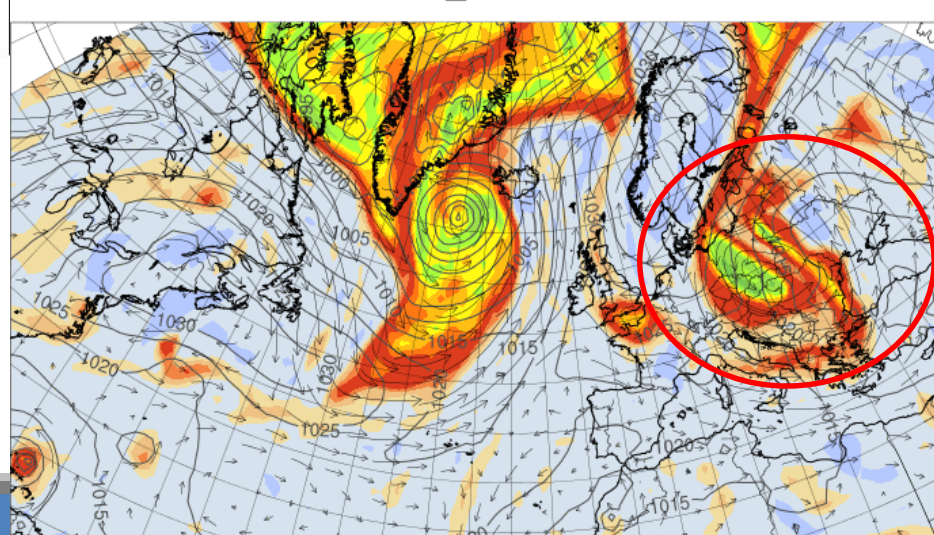
Forecast for Wed 05 Oct 2016 12 UTC

THE850, Z300 **BT01/00Z**

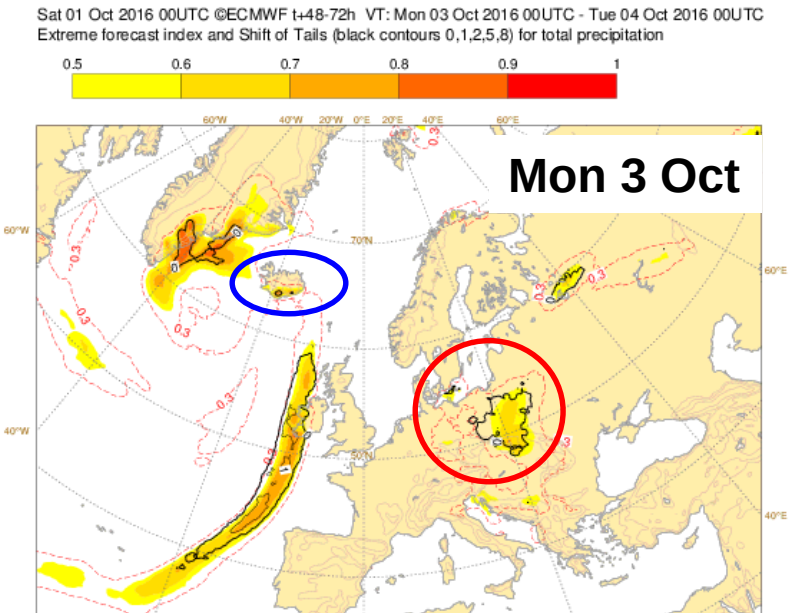


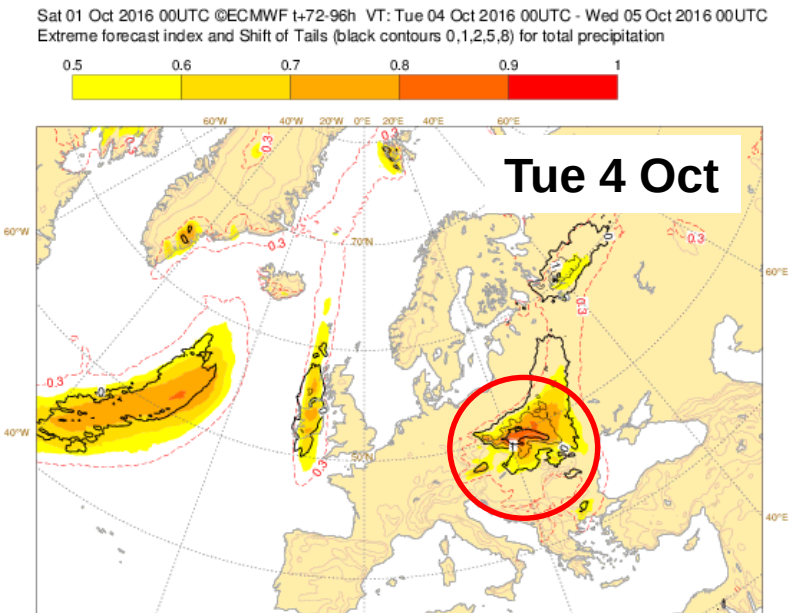
Frontal wave cyclone

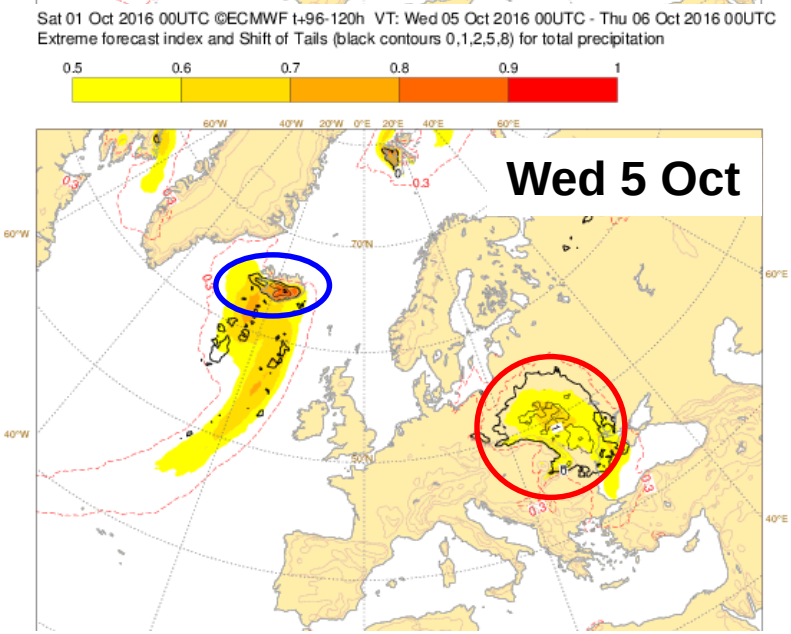


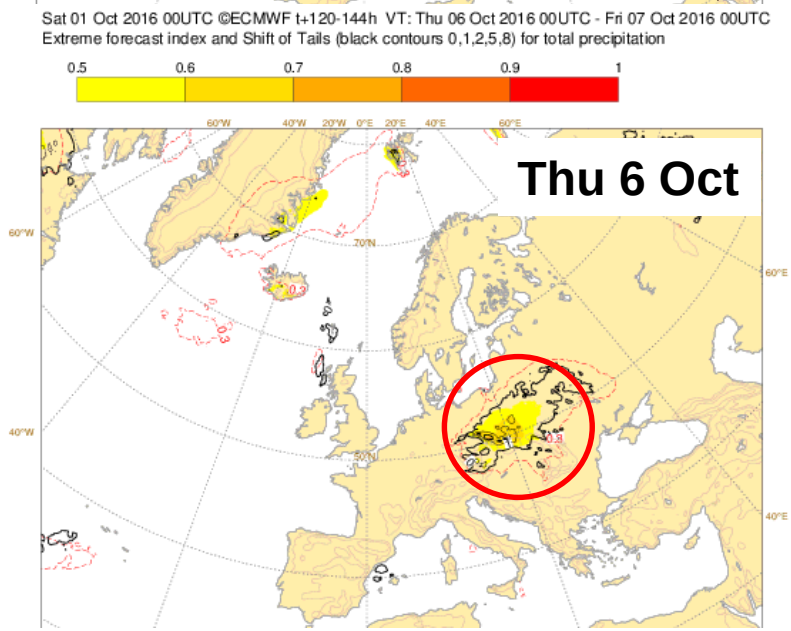


EFI precipitation for Mo 3 Oct - Thu 6 Oct (BT 01/00z)



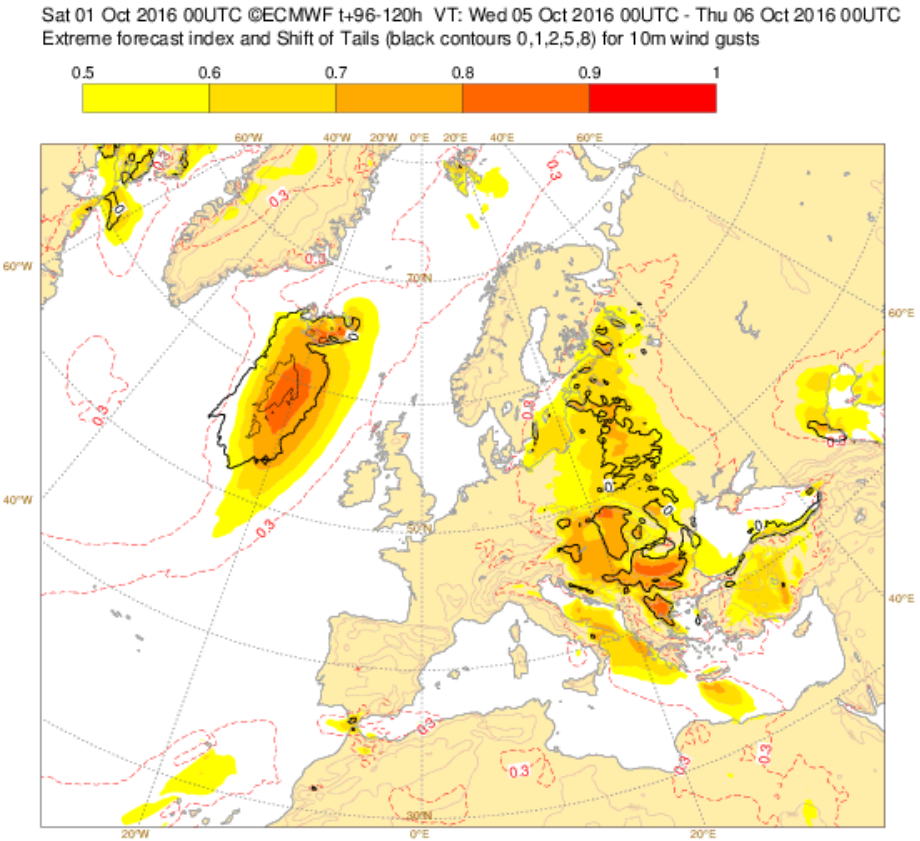


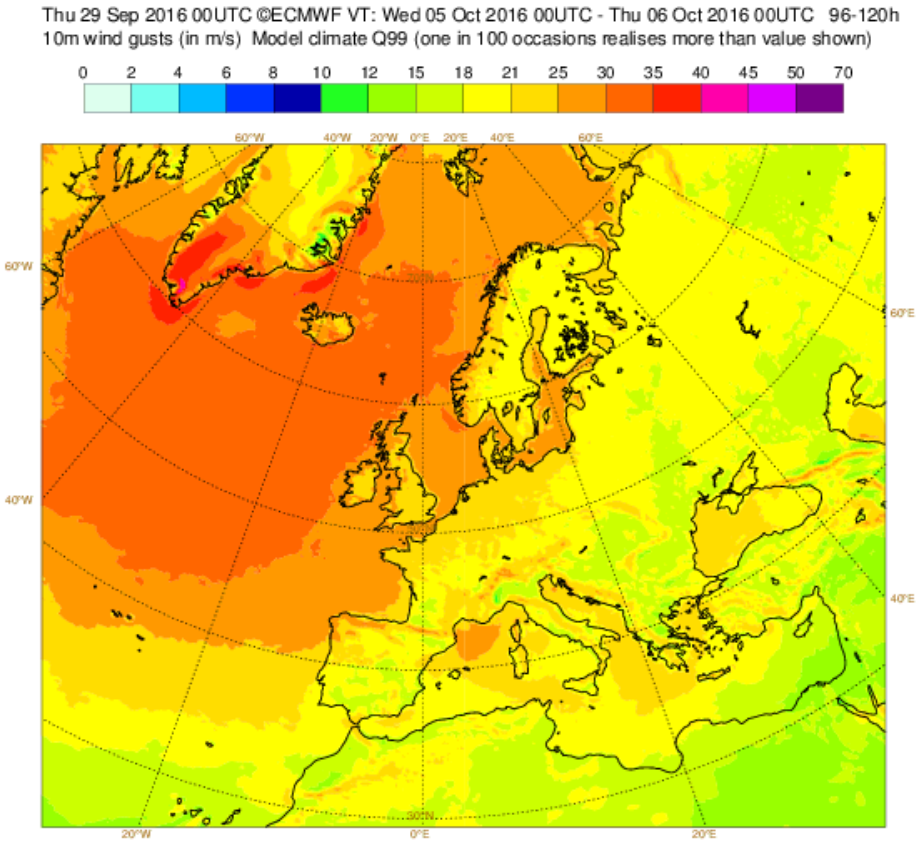




EFI gusts for Wednesday (BT 01/00z)

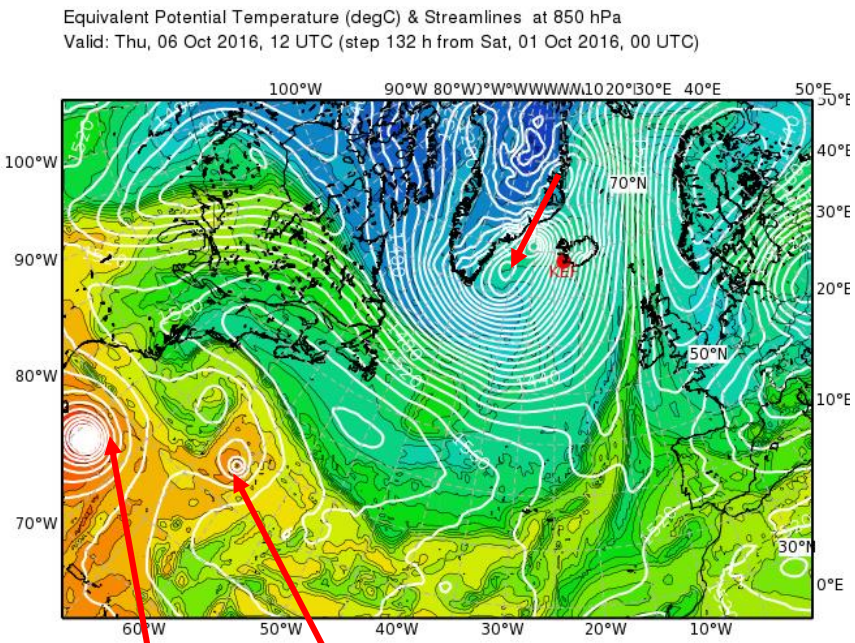
- Again more windy on Wednesday

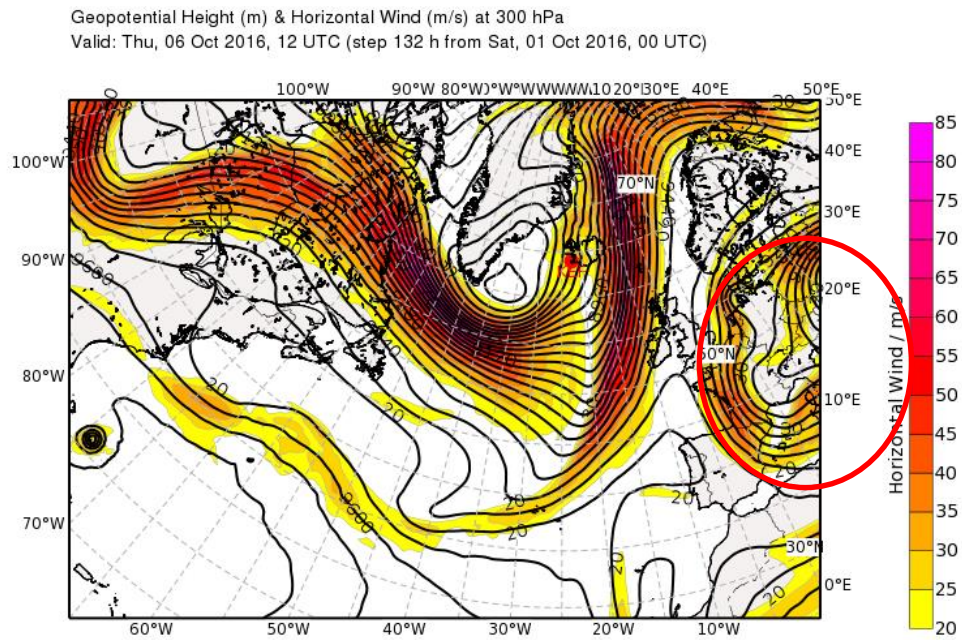




Forecast for Thu 06 Oct 2016 12 UTC

THE850, Z300 **BT01/00Z**





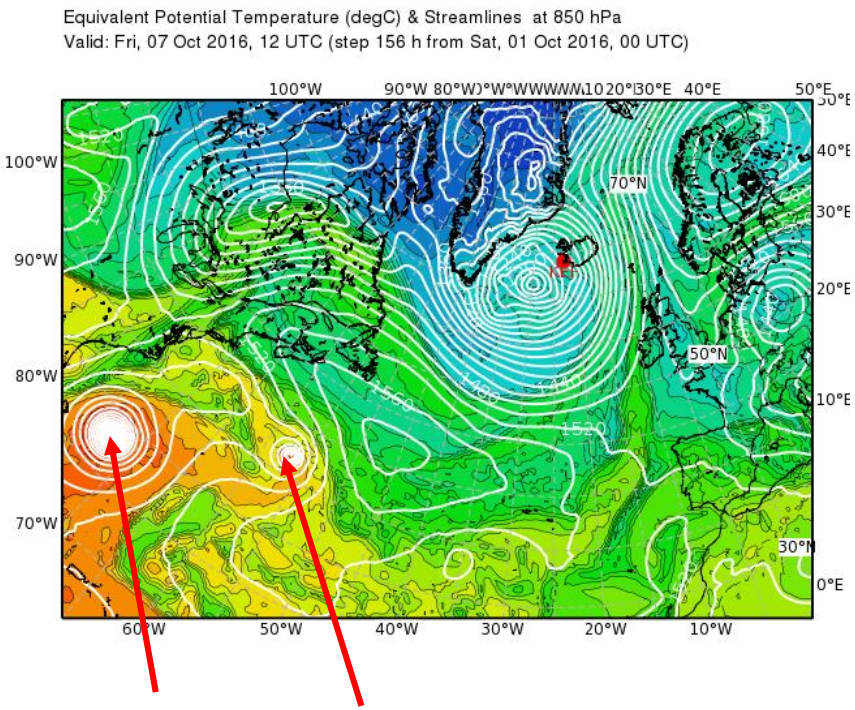
new subtropical cyclone

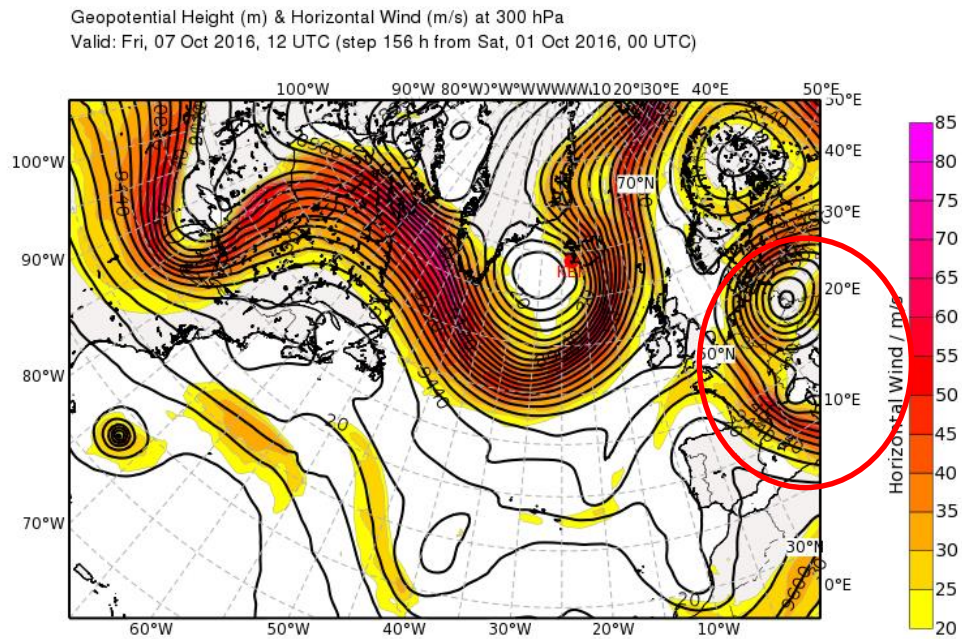
TC Matthew

- Cut-off over Europe
- Strong polward moisture transport
- Elongated jet east of Iceland

Forecast for Fri 07 Oct 2016 12 UTC

THE850, Z300 **BT01/00Z**

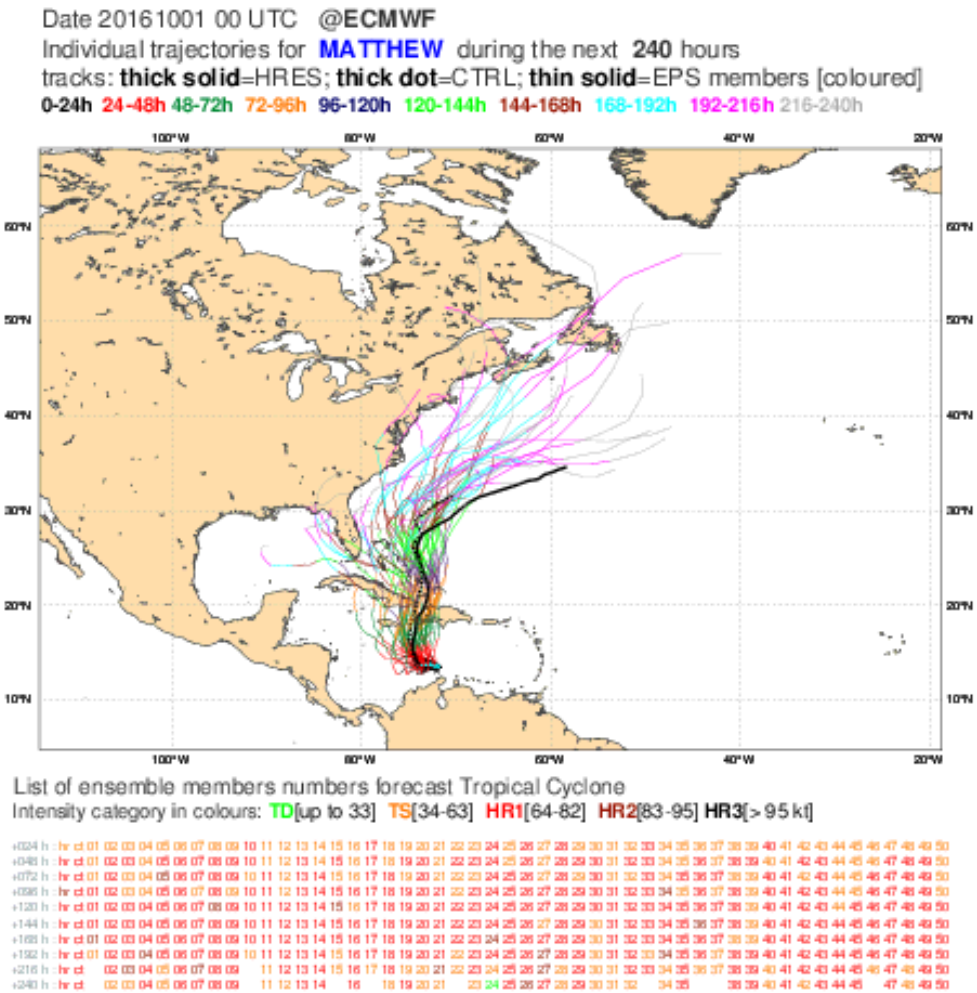


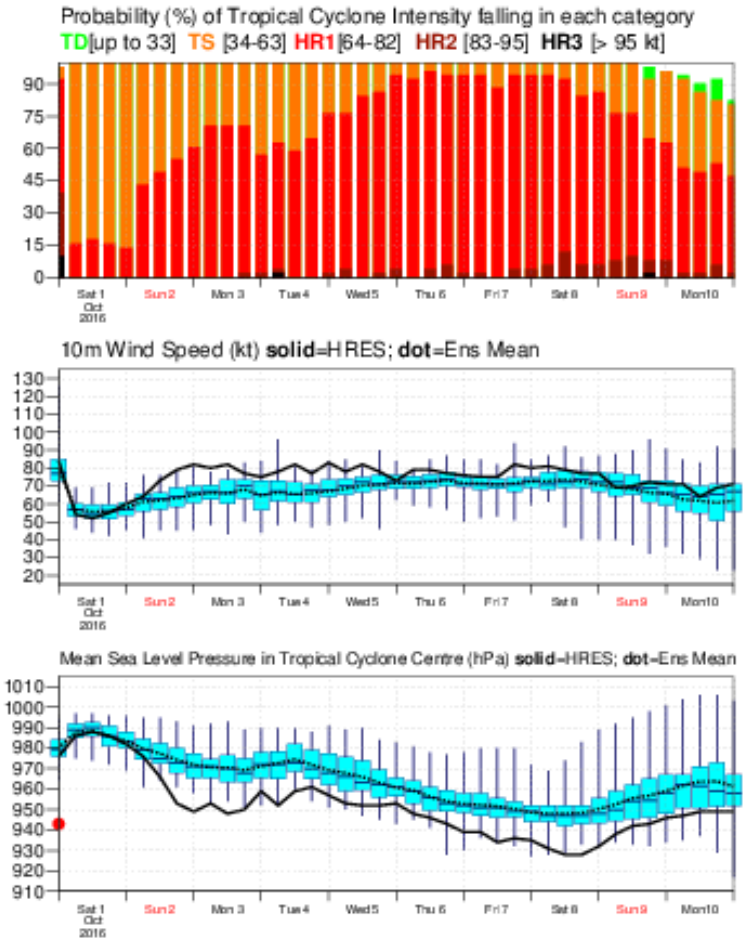


TC Matthew

new subtropical cyclone

Potential extratropical transition of Hurricane Matthew (now cat. 5!)





Summary plans

- **Sunday 2 October**
  - **HALO, FALCON** and **SAFIRE** Tropopause structure, WCB outflow/ascent regions; 25 HALO dropsondes

    or only **FALCON** and **SAFIRE**
  - **SAFIRE** afternoon A-Train overpass
- **Outlook Monday – Thursday 3-6 October:**
  - Windy conditions in KEF on Monday morning and Wednesday
  - No flights on Mon
  - Official down day on Mon or Thu
  - New frontal wave cyclone within reach Tue-Thu
  - Heavy precipitation in Central Europe Tue-Thu
- New procedure: **Radiosonde Task Team**