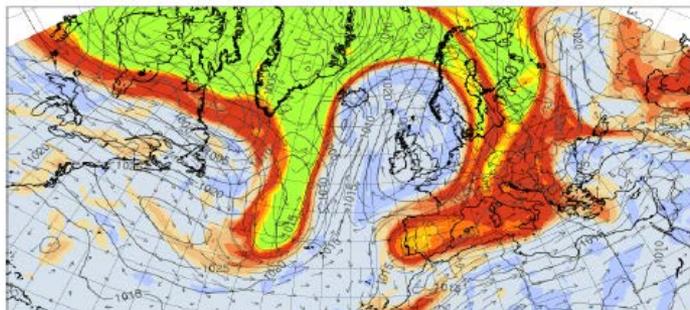


Weather Situation:

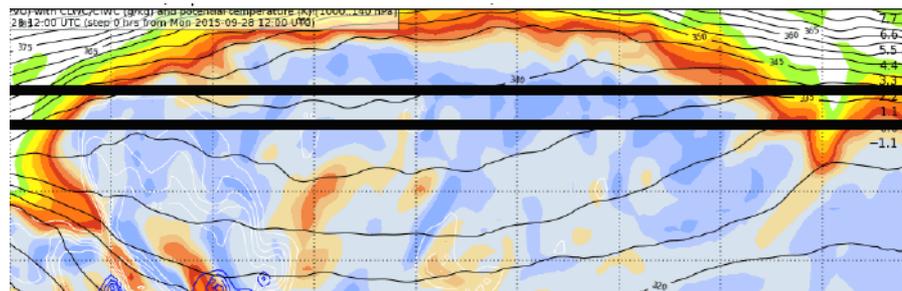
Week 1: SAT 26 Sep – FRI 2 Oct

28 Septe

PV@330K at 20150928_15

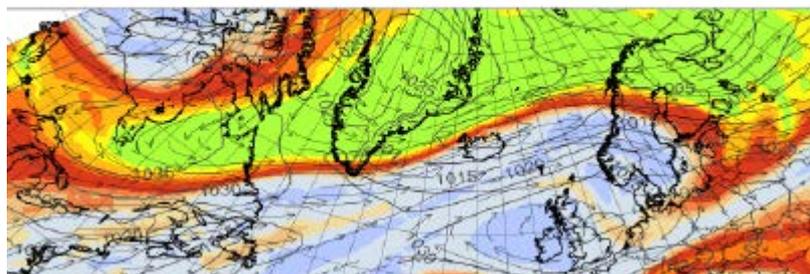


- Tropical Storm IDA
- Far southward extending trough
- Ridge building east of Iceland
- HIW over northern Norway
- Formation of a long lived PV streamer over the UK

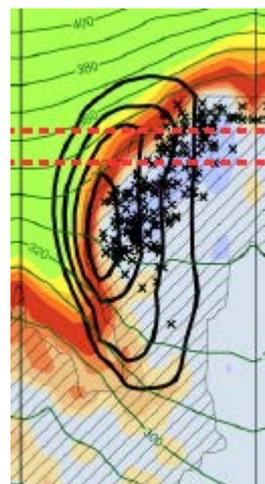


- HALO upstream flight in WCB inflow region
- HALO & Falcon flight over Iceland
- Possible extension to UK &

PV@330K at 20151001_12



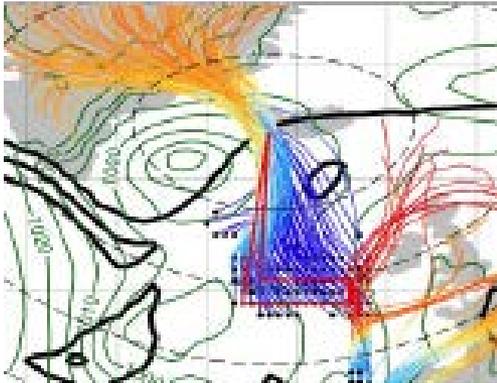
- Zonal jetstream
- WCB outflow south of Iceland
- Reduced predictability



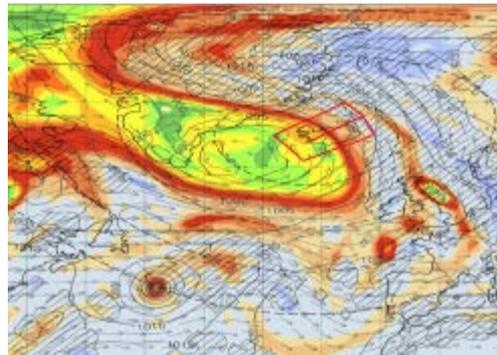
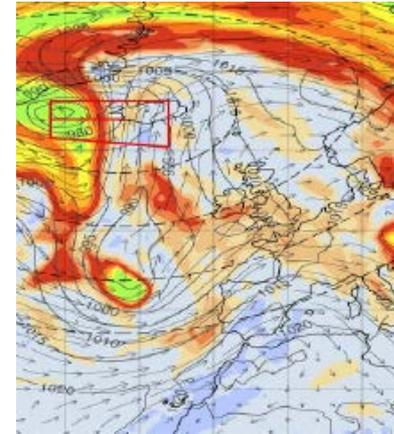
- HALO & Falcon coordinated flights

Weather Situation:

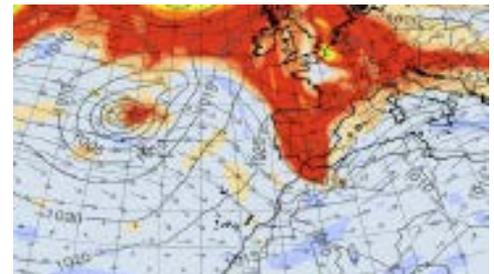
Week : SAT 03 Oct – THU 3 Oct



- WCB inflow/outflow
- HALO upstream flight
- Combined flight iceland



- Hurricane Joaquin & formation of PV streamer
- Formation of a pos. PV anomaly south of Iceland

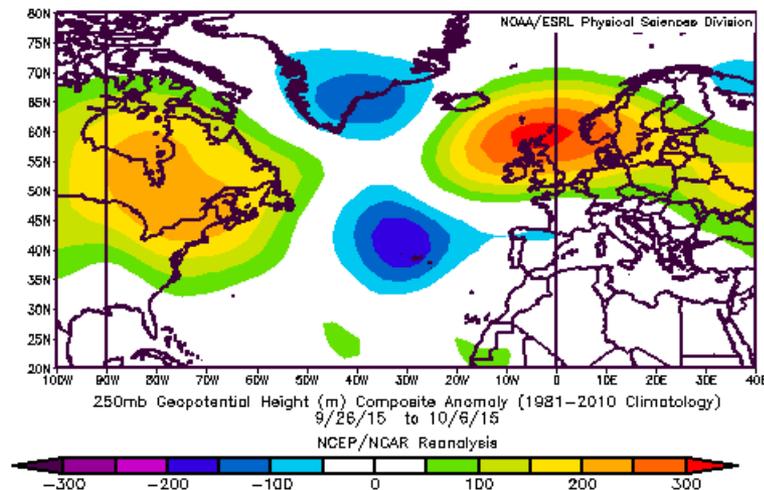
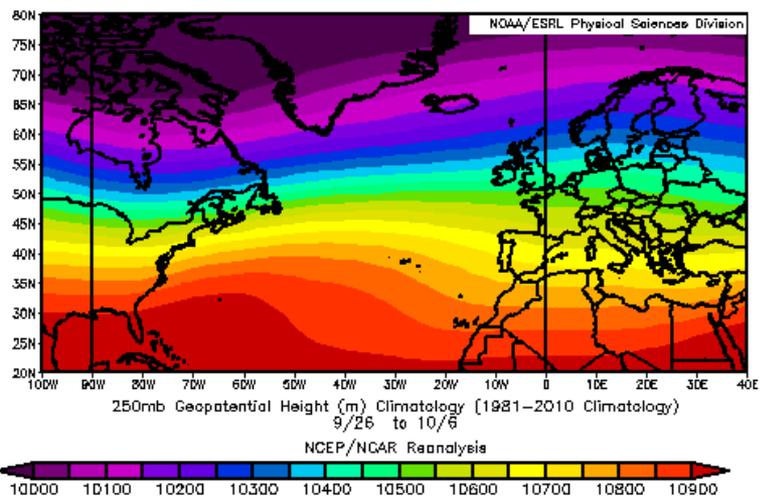
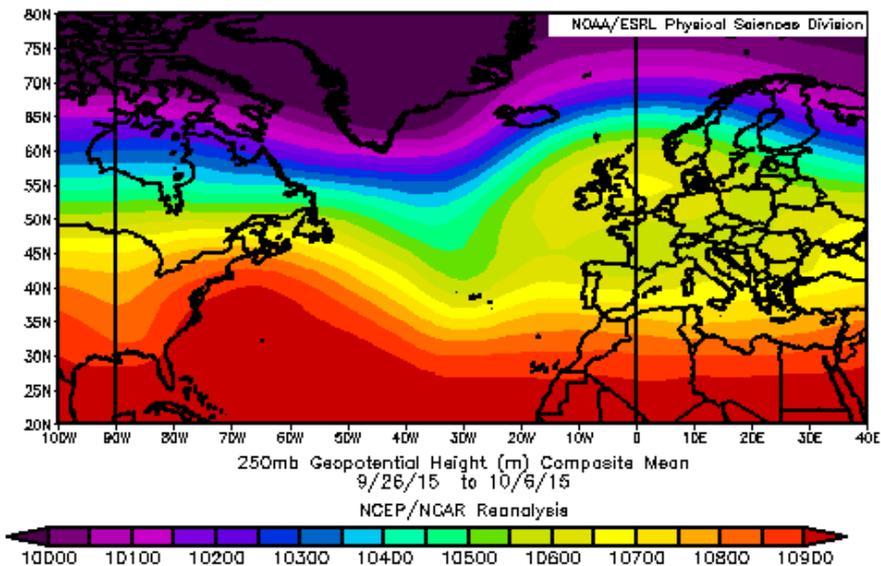


Weather Situation:

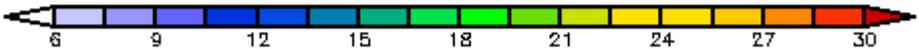
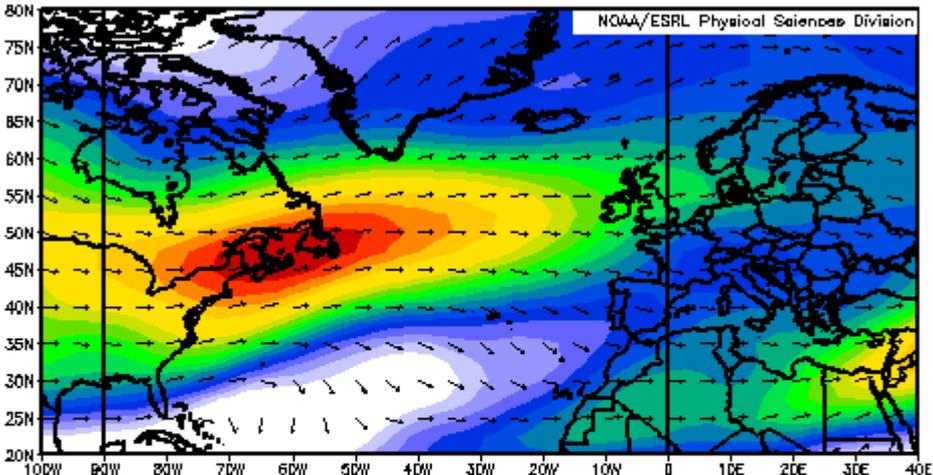
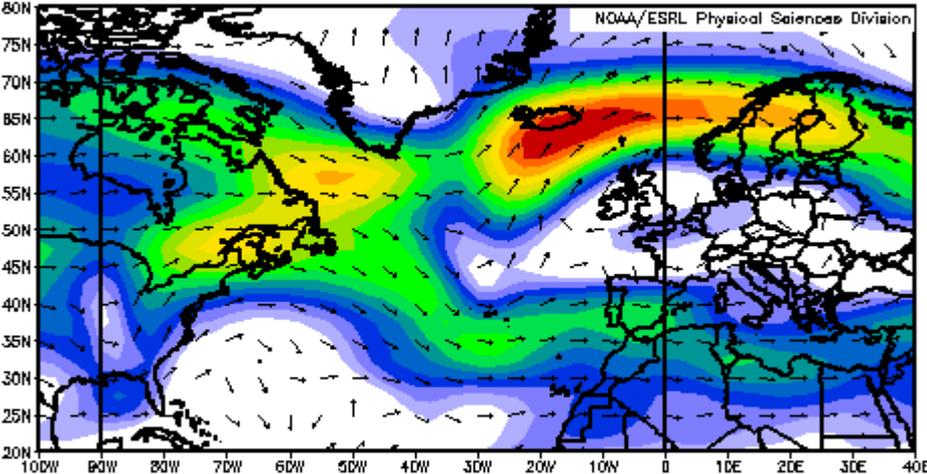
- 4-5 “NAWDEX weather events” in 2 weeks
- one „optimal case“ to observe the whole chain from ascending WCB airmasses to the interaction with the waveguide and formation of HIW
- 2 tropical systems that affected predictability in the early stage of the planning phase
- several possibilities to perform repeated flights in the proximity of Iceland due to blocking situation over Europe and Scandinavia
- inflows appeared to be at the maximum range of the aircraft. Some situations may require stopovers even with HALO
- observed very high outflows of WCB airmasses
- The formation of pos. PV anomalies with quasi-lagrangian flights came up as an interesting scientific goal also as it connects with the ground-based observations
- Long period of blocking high over Europe and little HIW downstream

Weather Situation:

250 hPa Geopotential Height



250 hPa Winds



General flight planning:

- Iceland seems to be the right location to access the North Atlantic
- Heini: the discussion between the partners works very well. overall we have common objectives and a common language, which is very helpful then for the real, likely more stressful, flight planning
- the strategy to fly low for upstream flights and high in radar controlled air space over Iceland worked well for the dry run cases
- ADBOBE Connect was a valuable instrument for the dryrun.
- Heini: communication by videoconferencing works, but in my opinion is not as good as when being together in a room - what I take from this is that it will be very good if several of us will be physically in Iceland during the campaign (and of course others can join via video).

Aims:

- D/CH Plans

- Moisture structure in the boundary layer *
- Mixed phase clouds **
- Upper level PV ***
- Diabatic effects on cyclonic systems *
- Impacts of tropopause waveguide uncertainty on HIW events **XX**
- Moisture and cloud structure in tropopause region **/ **XX**
- Quantification of analysis errors
- Lagrangian Tracking of disturbances

Flight Planning Tools:

- Flight planning tools worked fine and allowed a sophisticated weather discussion
- We saw that some additional **ENS information** (e.g. Spaghetti plots) are needed
 - ETH Spaghetti of 2PV contour implemented
 - Gwendals spaghetti of surface pressure very helpful. Operational?
- Do we see **PV Anomalies on the stratospheric side of the jetstream** and can we see radiative impact on observed airmasses? Same for PV lenses.
 - Johns RDF trajectories would be valuable to see potential changes in Theta
 - Trajectories from flight track with time series of theta, pressure, thetaE to see heating from different diabatic processes?
- **Adjoint sensitivity** calculations are an interesting tool. Target box can be shifted to regions of HIW during NAWDEX.
- Interest in a demonstration of **Met3D** by Marc Rautenhaus in upcoming weeks
 - > What else do we need?

Open points:

- Are we in the right weeks? 2 weeks in September / 2 weeks in October?
- How many **dropsondes** would we need?
- Do we want to dive with HALO: where do we want to make turbulence observations?
May dives replace sondes in some situations?
- How do the observations help for predictability studies?
- How do we organize the contact to **ground-based observation** facilities? Especially, Norway and Iceland would have been very valuable observation sites (beside the UK)
- Use radiosonde station e.g. LMU (we did that during Deepwave/GWLcycle)
- Do we need a proper **documentation of the FC products**
- Archived > Further discussion next weeks
- Based on the dry run cases we want to work with pilots on detailed flight plans with NAWDEX payload to further **define range of aircraft** (table range depending on FL)
- Summarize **working hour restrictions** in the NAWDEX CIP
- Discuss about refueling options for HALO at Azores (overnight stay)
- we should write a short “news item” on the web about the dry run during the next days