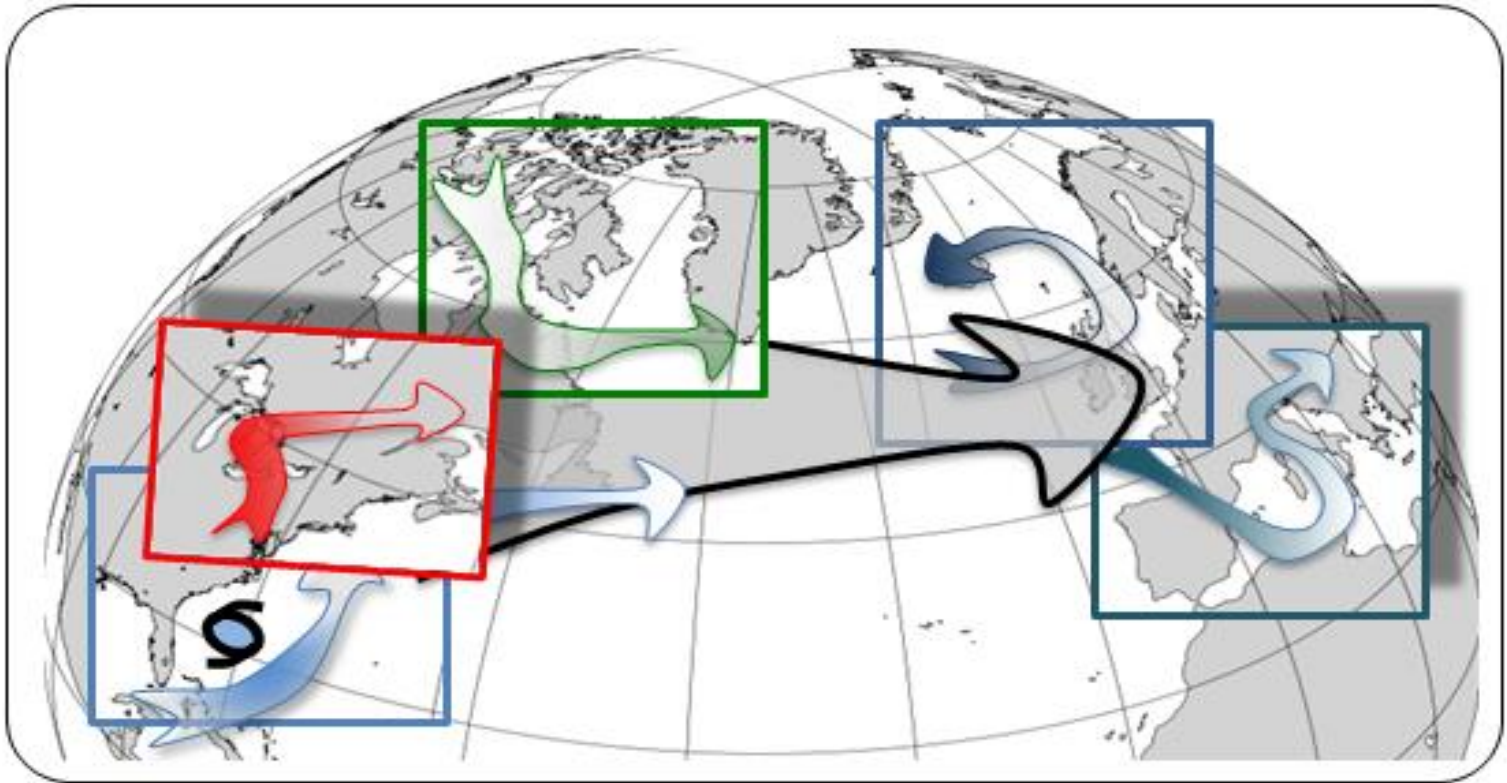


NAWDEX – Flight Planning Meeting

14 September 2016, online conference



Tasks and schedule

- Changed plans for Halo transfer: **Halo and Falcon** transfer scheduled for **Saturday**
- **Today's weather briefing**
- Current situation
- Evolution until Saturday
- Uncertainty on Saturday
- Further outlook

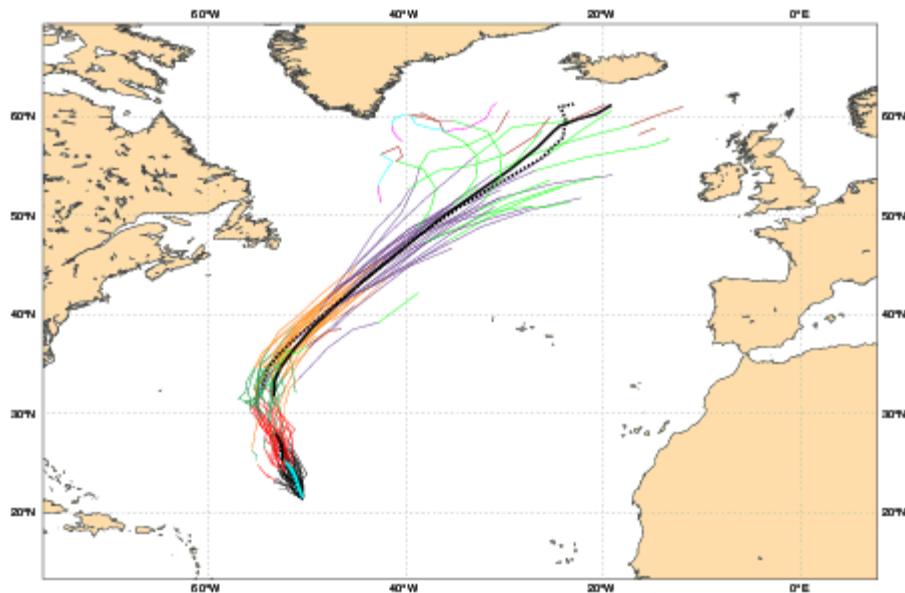
TC Ian Track forecasts 12/12Z

Date 20160912 12 UTC @ECMWF

Individual trajectories for **IAN** during the next 240 hours

tracks: **thick solid**=HRES; **thick dot**=CTRL; **thin solid**=EPS members [coloured]

0-24h 24-48h 48-72h 72-96h 96-120h 120-144h 144-168h 168-192h 192-216h 216-240h



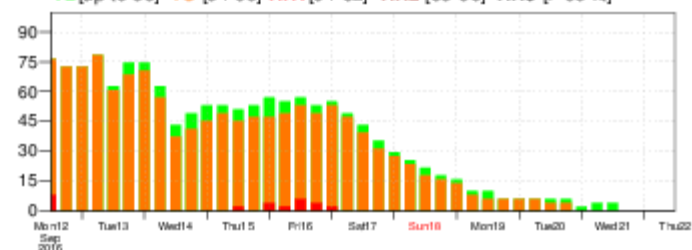
List of ensemble members forecast Tropical Cyclone

Intensity category in colours: **TD**[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[> 95 kt]

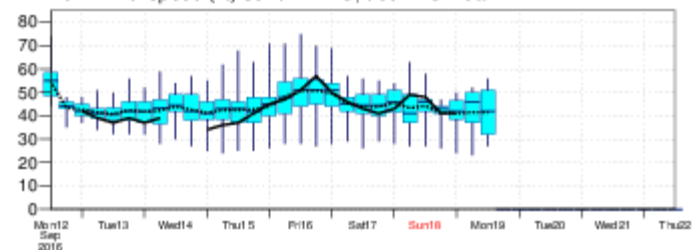
v024 h: -hr	01 02 03 05 07	09 10 12	15 16 18	20 21 23 24	26 27 28 29 30	32 33	35 36 37 38	42	44	46 48 50
v048 h: -hr	01 02 03 05	09 10 12	17 18	20 22 23	29 30 32 33	35 37	39	42 43 44	46 47	49 50
v072 h: -hr	01 02 03 05	09 10 12	16 17 18	20 22 23	29 30 32 33	35 37	39	42 44	46 47	49 50
v096 h: -hr	01 02 03 05	09 10 12	16 17 18	20 22 23	29 30 32 33	35 36 37 38	42	44	46 47	49 50
v120 h: -hr	01 02 05	10 12	16 18	22 23	29 30 32 33	35 36 37 38	42	47	49 50	
v144 h: -hr	01	10 12	16 18		30 33 36		42	47	49	
v168 h: -		12	18		30	35		47	49	
v192 h: -		12	18						49	
v216 h: -		12	18						49	
v240 h: -										

Probability (%) of Tropical Cyclone Intensity falling in each category

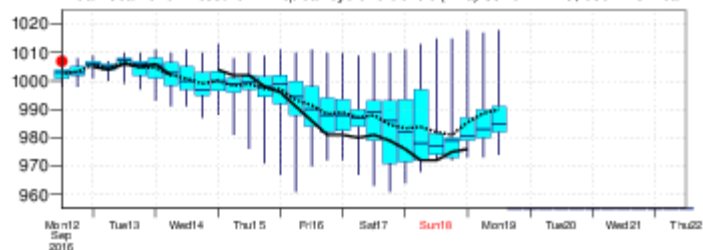
TD[up to 33] **TS** [34-63] **HR1**[64-82] **HR2** [83-95] **HR3** [> 95 kt]



10m Wind Speed (kt) **solid**=HRES; **dot**=Ens Mean



Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) **solid**=HRES; **dot**=Ens Mean



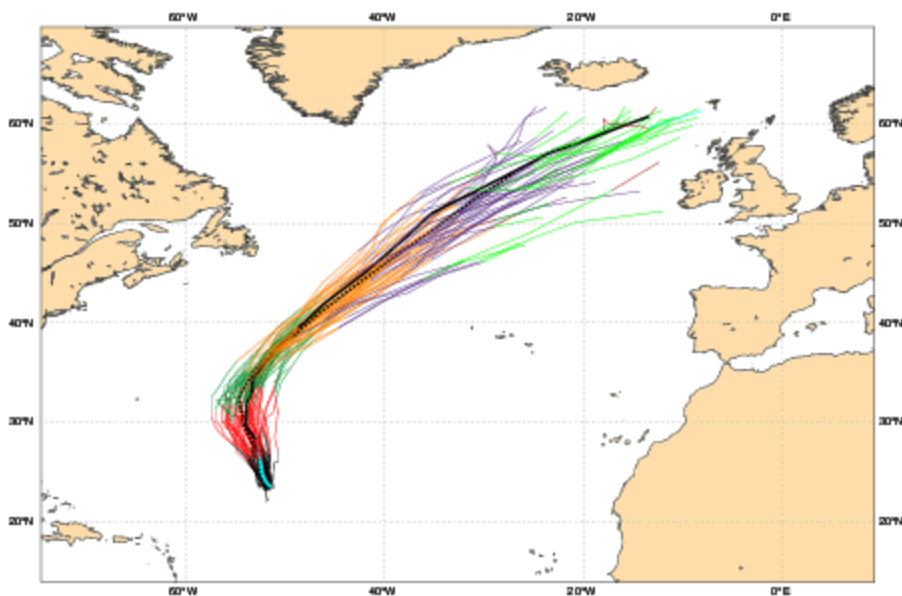
TC Ian Track forecasts 13/00Z

Date 20160913 00 UTC @ECMWF

Individual trajectories for **IAN** during the next 240 hours

tracks: **thick solid**=HRES; **thick dot**=CTRL; **thin solid**=EPS members [coloured]

0-24h 24-48h 48-72h 72-96h 96-120h 120-144h 144-168h 168-192h 192-216h 216-240h

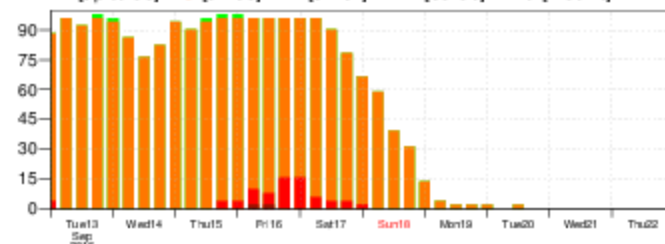


List of ensemble members numbers forecast Tropical Cyclone

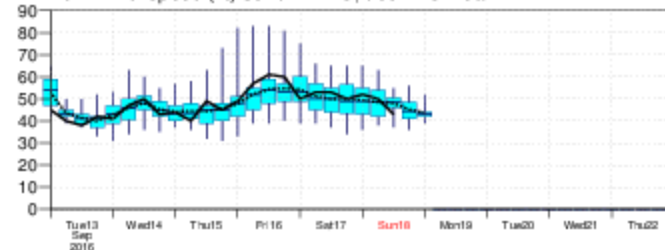
Intensity category in colours: **TD**[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[> 95 kt]

+024 h:	hr	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50						
+048 h:	hr	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50						
+072 h:	hr	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50						
+096 h:	hr	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50						
+120 h:	hr	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50						
+144 h:	hr																																																								
+168 h:	hr																																																								
+192 h:	hr																																																								
+216 h:	hr																																																								
+240 h:	hr																																																								

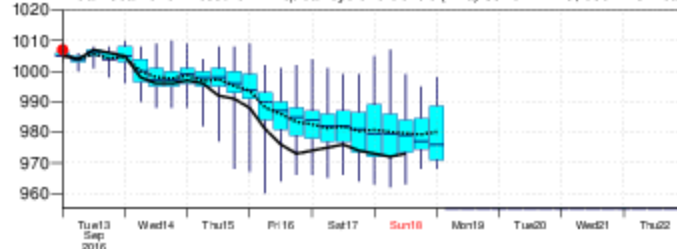
Probability (%) of Tropical Cyclone Intensity falling in each category
TD[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[> 95 kt]



10m Wind Speed (kt) **solid**=HRES; **dot**=Ens Mean



Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) **solid**=HRES; **dot**=Ens Mean



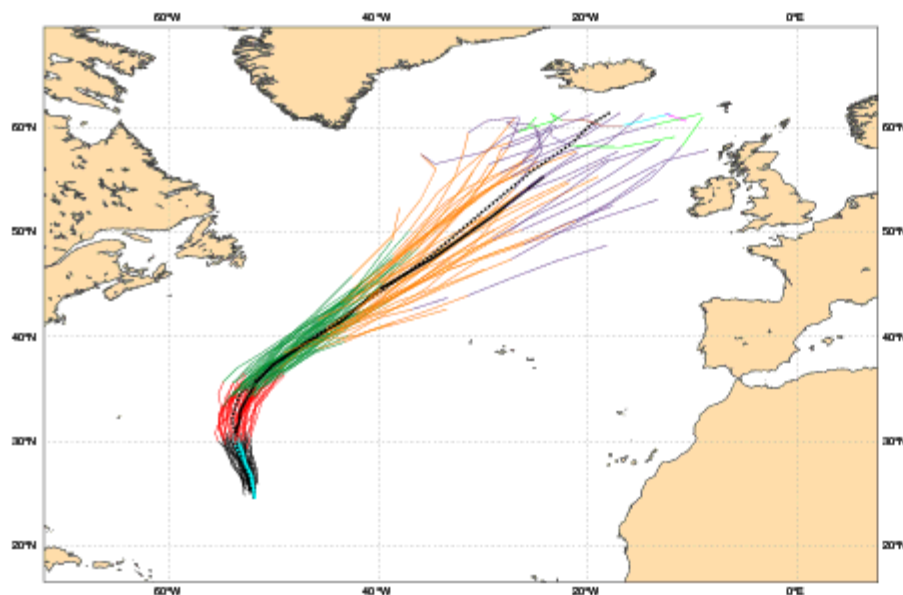
TC Ian Track forecasts 13/12Z

Date 20160913 12 UTC @ECMWF

Individual trajectories for **IAN** during the next 240 hours

tracks: **thick solid**=HRES; **thick dot**=CTRL; **thin solid**=EPS members [coloured]

0-24h 24-48h 48-72h 72-96h 96-120h 120-144h 144-168h 168-192h 192-216h 216-240h

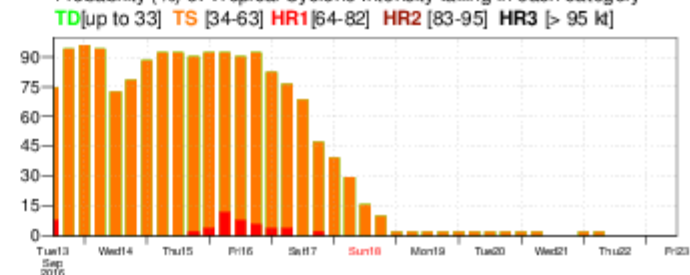


List of ensemble members numbers forecast Tropical Cyclone

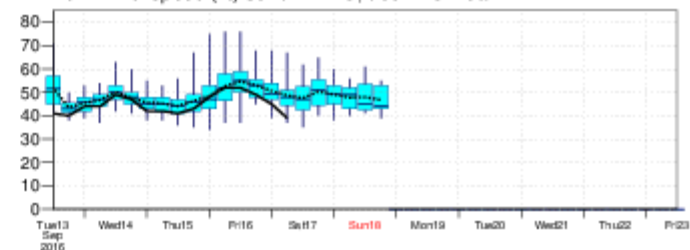
Intensity category in colours: **TD**[up to 33] **TS**[34-63] **HR1**[64-82] **HR2**[83-95] **HR3**[> 95 k]

+024 h:	hr 01	02 03	06	08 09 10	12 13 14 15 16 17 18	20	22	24 25 26	28 29 30	32 33 34 35 36 37 38 39	41	42	45 46	48 49 50
+048 h:	hr 01	02 03 04 05 06 07 08 09 10 11	12 13 14 15 16 17 18	20	21 22 23 24 25 26 27 28 29 30 31	32 33 34	36 37 38 39	41	42 43	45 46 47 48 49 50				
+072 h:	hr 01	02 03 04 05 06 07 08 09 10 11	12 13 14 15 16 17 18	20	21 22 23 24 25 26 27 28 29	31	32 33 34 35 36 37 38 39	41	42 43	45 46 47 48 49 50				
+096 h:	hr 01	02 03 04 05 06 07	09 10 11 12 13 14 15	17 18	21 22 23 24	26	29	31	33 34 35	37 38 39	41	42 43	45 46 47 48 49 50	
+120 h:	02 03 04	09	11		21 22 23 24	26	29	31	33 34 35	37 38 39	41	42 43	45 46 47 48 49 50	
+144 h:													45	46
+168 h:													45	46
+192 h:													45	46
+216 h:													45	46
+240 h:													45	46

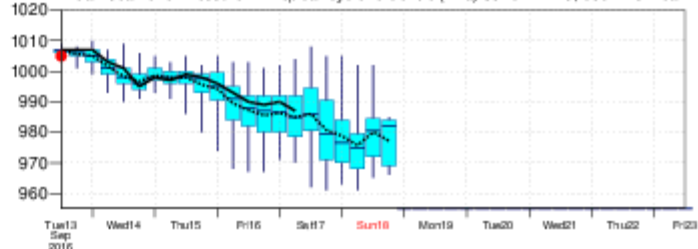
Probability (%) of Tropical Cyclone Intensity falling in each category



10m Wind Speed (kt) **solid**=HRES; **dot**=Ens Mean



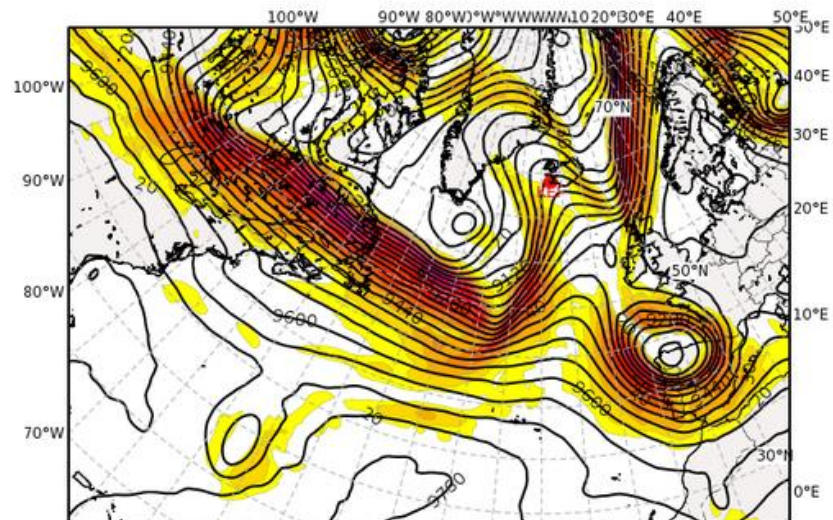
Mean Sea Level Pressure in Tropical Cyclone Centre (hPa) **solid**=HRES; **dot**=Ens Mean



Analysis – 14 Sep 2016, 00 UTC

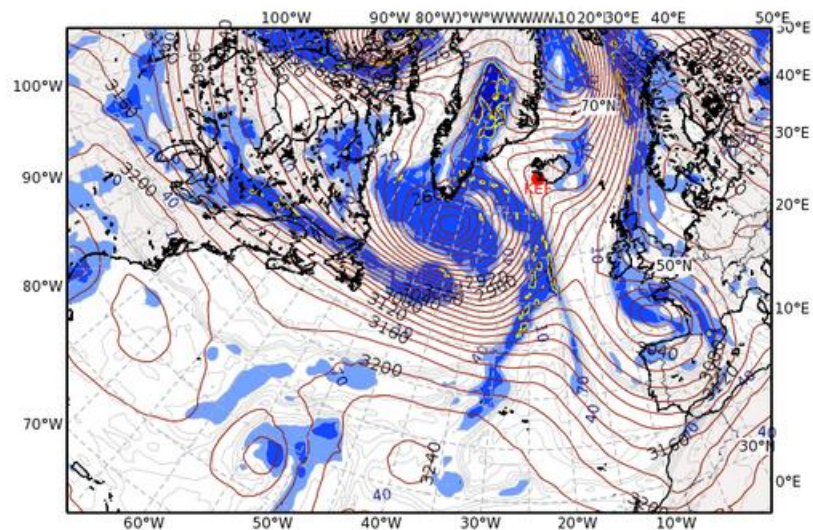
Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa

Valid: Wed, 14 Sep 2016, 00 UTC (step 000 h from Wed, 14 Sep 2016, 00 UTC)



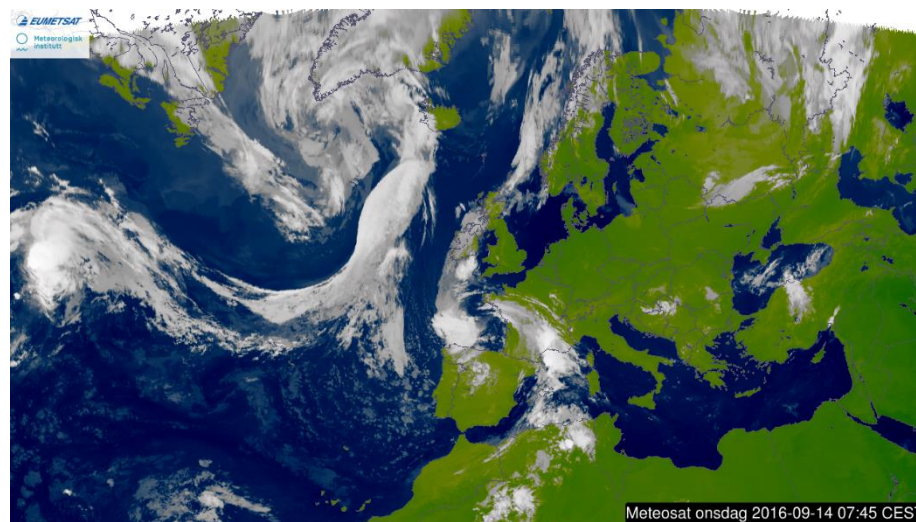
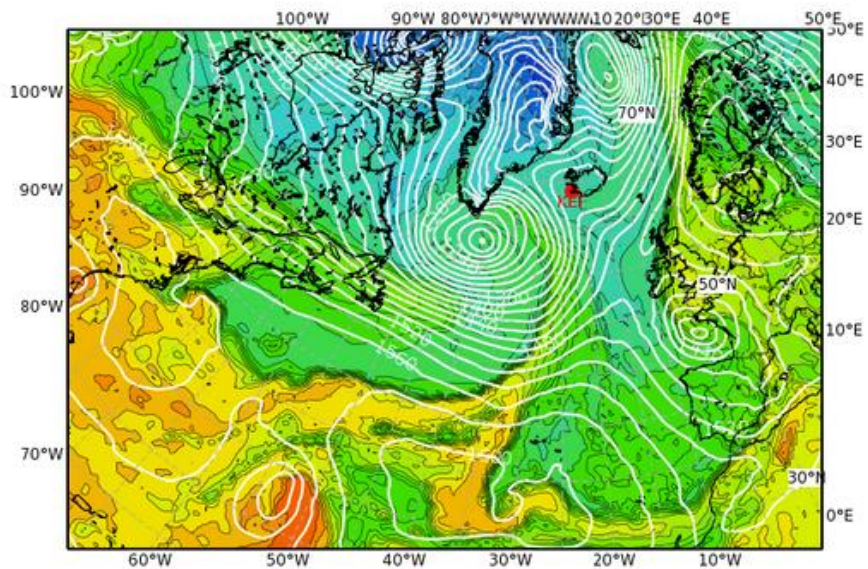
Relative Humidity (%) and Z (m) at 700 hPa

Valid: Wed, 14 Sep 2016, 00 UTC (step 000 h from Wed, 14 Sep 2016, 00 UTC)



Equivalent Potential Temperature (degC) & Streamlines at 850 hPa

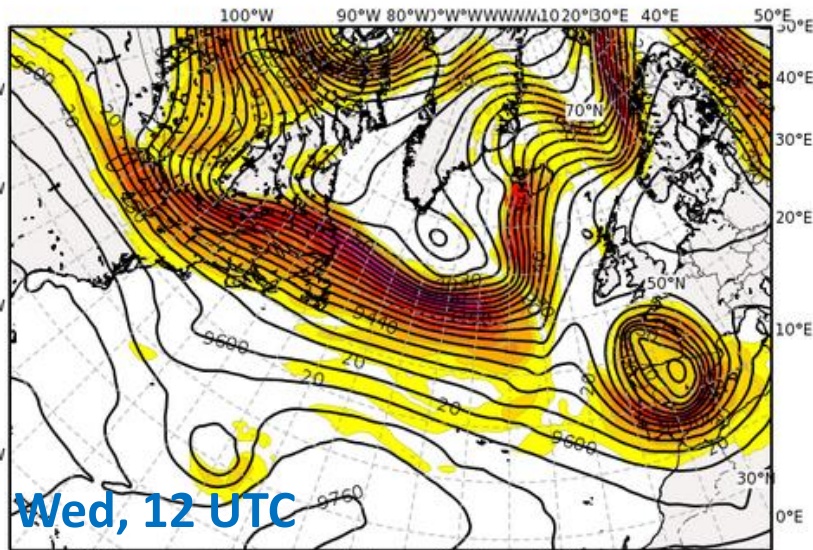
Valid: Wed, 14 Sep 2016, 00 UTC (step 000 h from Wed, 14 Sep 2016, 00 UTC)



Forecast until Sat, 17 Sep 2016

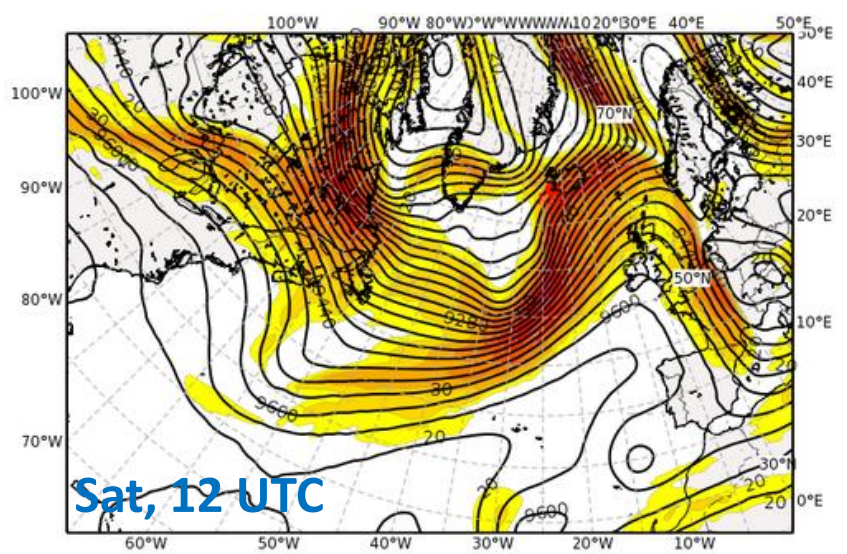
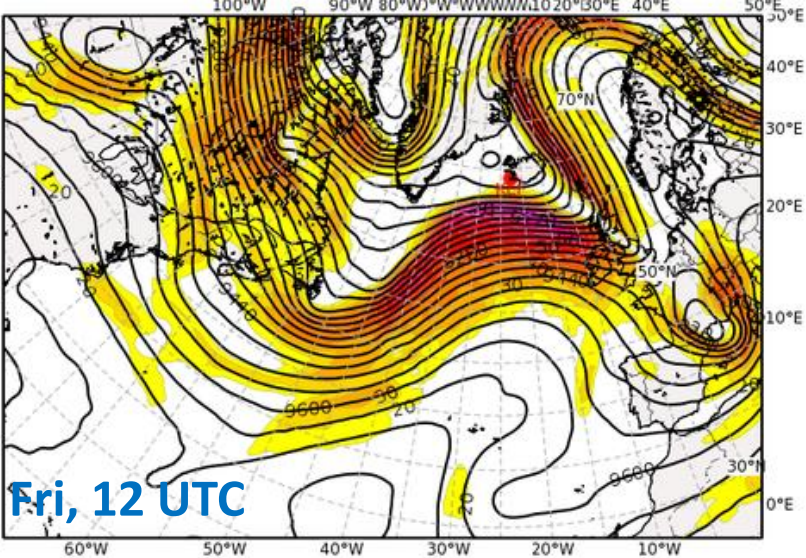
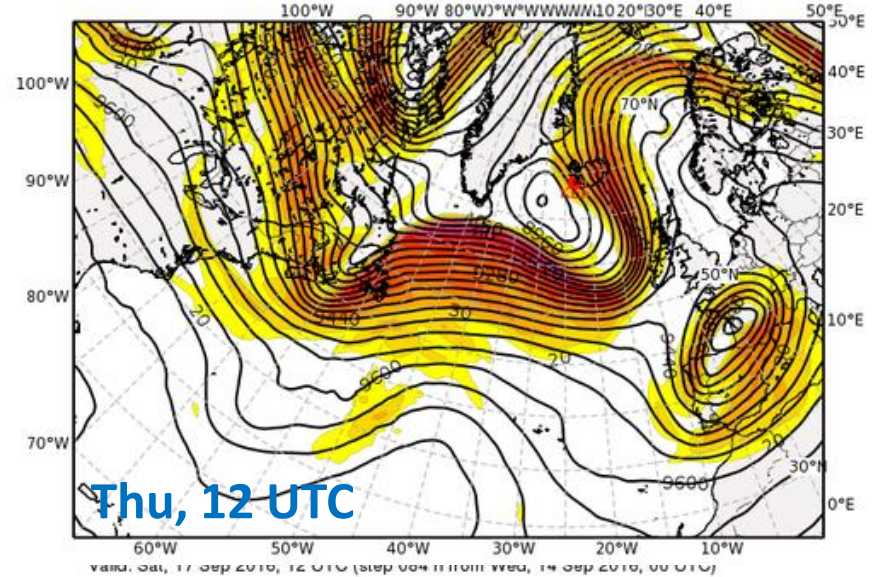
Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa

Valid: Wed, 14 Sep 2016, 12 UTC (step 012 h from Wed, 14 Sep 2016, 00 UTC)



Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa

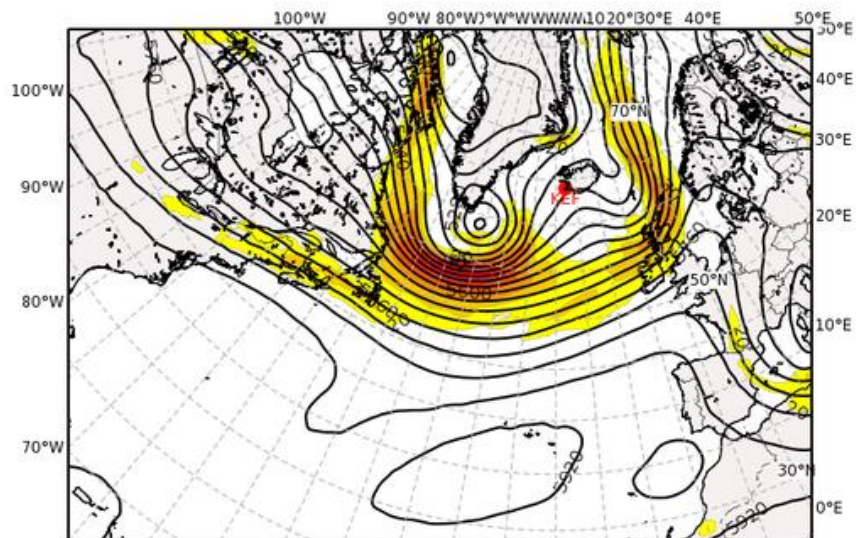
Valid: Thu, 15 Sep 2016, 12 UTC (step 036 h from Wed, 14 Sep 2016, 00 UTC)



Forecast for Sat, 17 Sep 2016 12 UTC

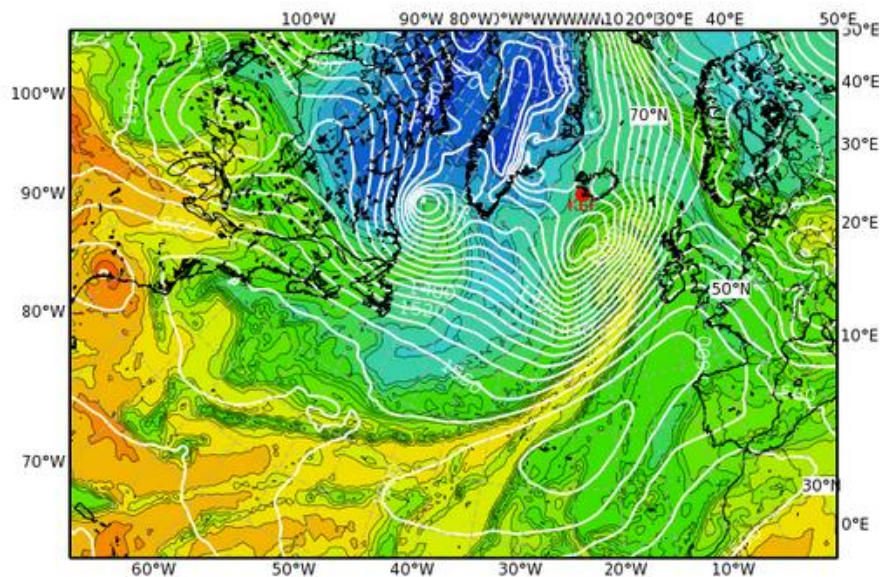
Geopotential Height (m) & Horizontal Wind (m/s) at 500 hPa

Valid: Sun, 18 Sep 2016, 12 UTC (step 108 h from Wed, 14 Sep 2016, 00 UTC)



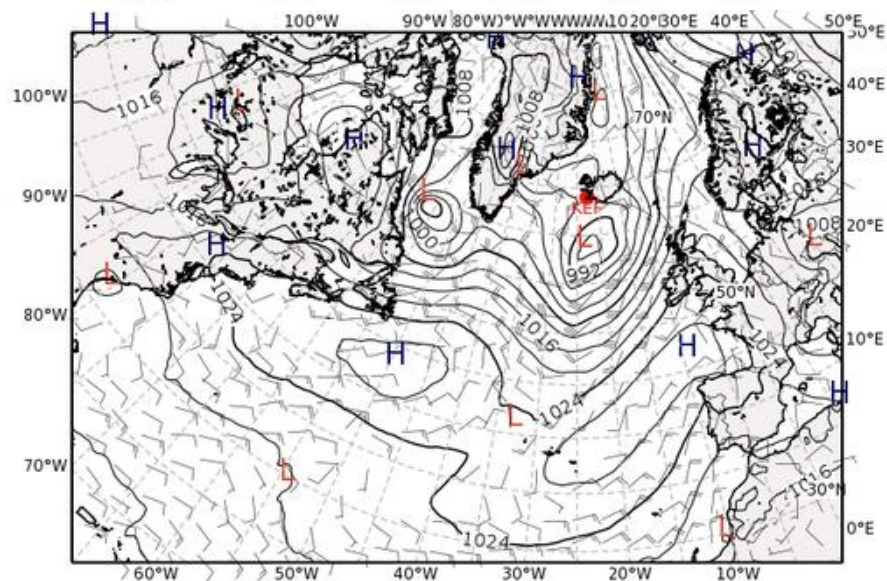
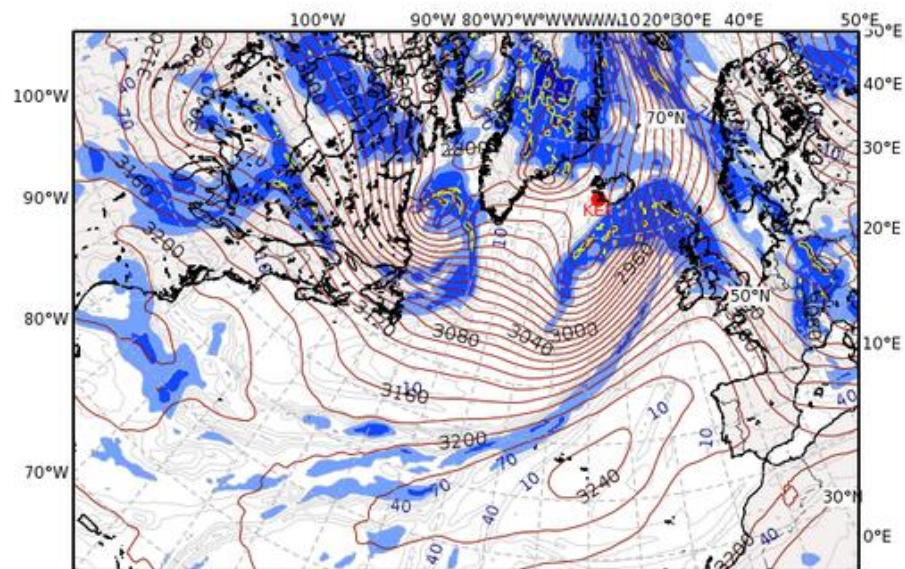
Equivalent Potential Temperature (degC) & Streamlines at 850 hPa

Valid: Sat, 17 Sep 2016, 12 UTC (step 084 h from Wed, 14 Sep 2016, 00 UTC)



Relative Humidity (%) and Z (m) at 700 hPa

Valid: Sat, 17 Sep 2016, 12 UTC (step 084 h from Wed, 14 Sep 2016, 00 UTC)

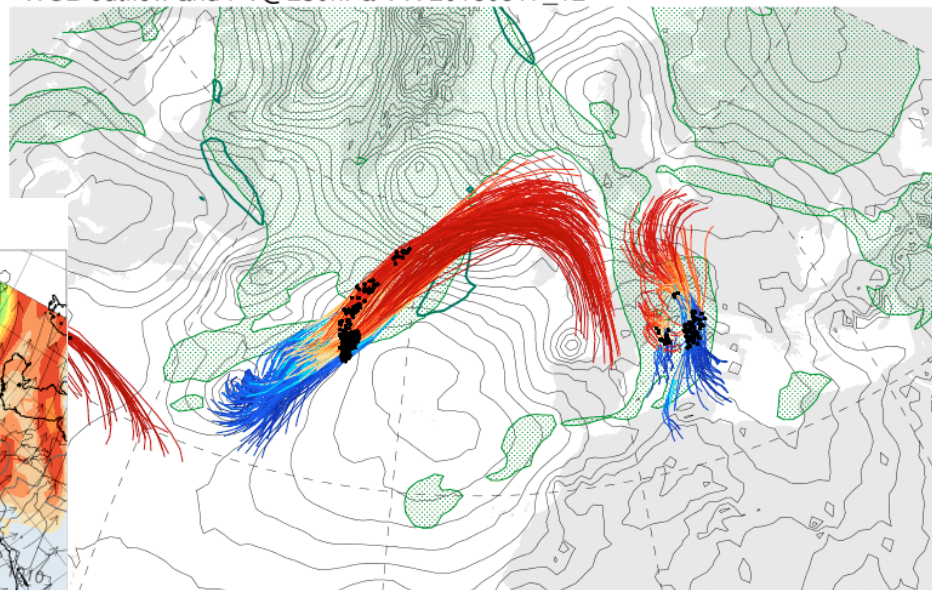
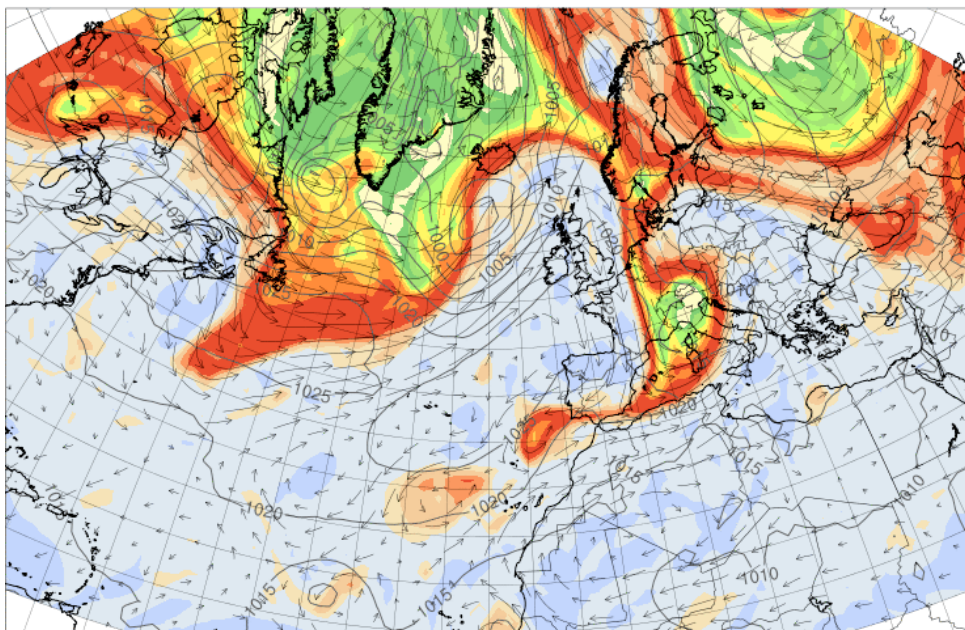


Forecast for Sat, 17 Sep 2016 12 UTC

BT 14/00Z

Trajectory start and SLP VT: 20160915_12
WCB outflow and PV@250hPa VT: 20160917_12

PV@330K at 20160917_12



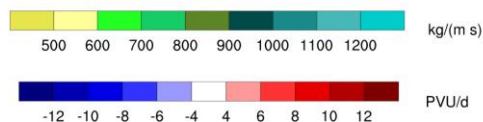
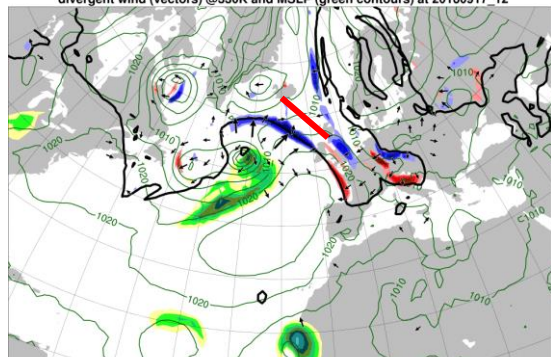
200 300 400 500 600 700 800 900 1000 hPa

-0.5 0.2 0.7 1 1.5 2 4 5 6 7 8 9 10 pvu

pvu

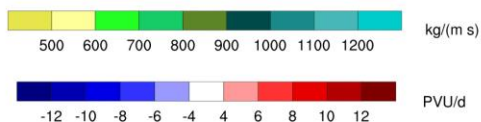
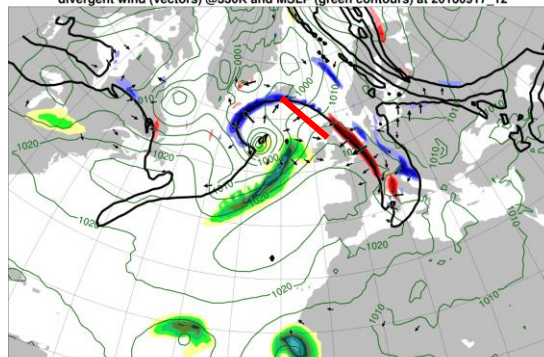
Overview model consistency Sat 17/12Z ECMWF Hres

2 PVU (black contour), PV advection through divergent wind (shading),
divergent wind (vectors) @330K and MSLP (green contours) at 20160917_12



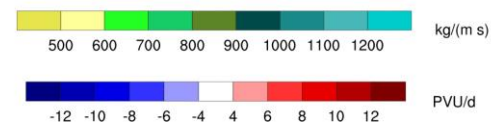
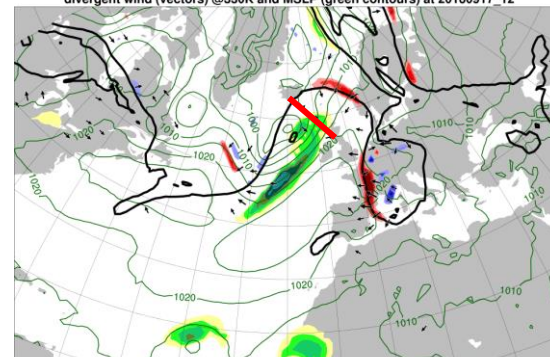
BT 12/12Z

2 PVU (black contour), PV advection through divergent wind (shading),
divergent wind (vectors) @330K and MSLP (green contours) at 20160917_12



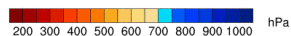
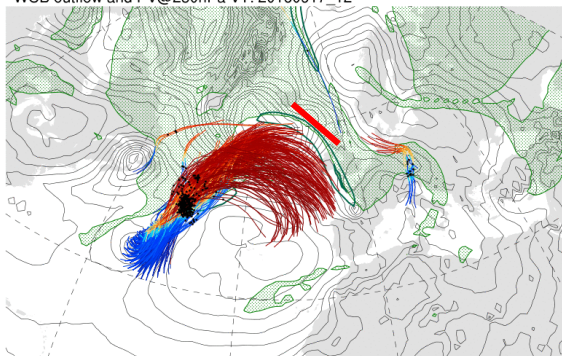
BT 13/00Z

2 PVU (black contour), PV advection through divergent wind (shading),
divergent wind (vectors) @330K and MSLP (green contours) at 20160917_12

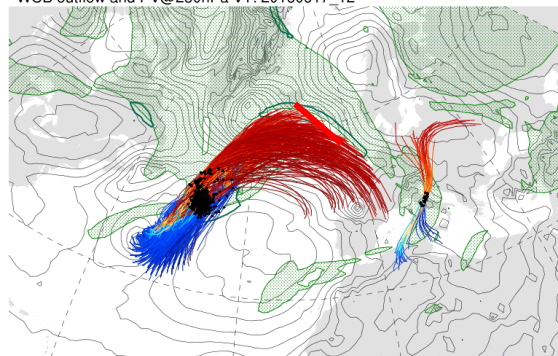


BT 13/12Z

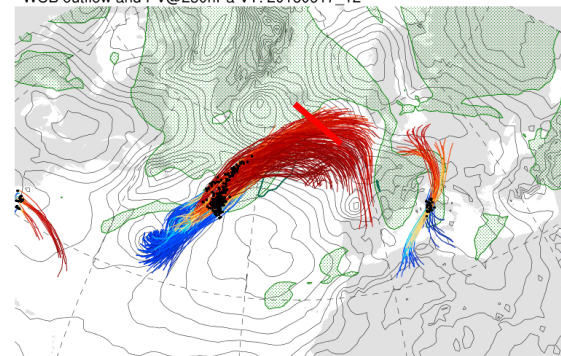
Trajectory start and SLP VT: 20160915_12
WCB outflow and PV@250hPa VT: 20160917_12



Trajectory start and SLP VT: 20160915_12
WCB outflow and PV@250hPa VT: 20160917_12

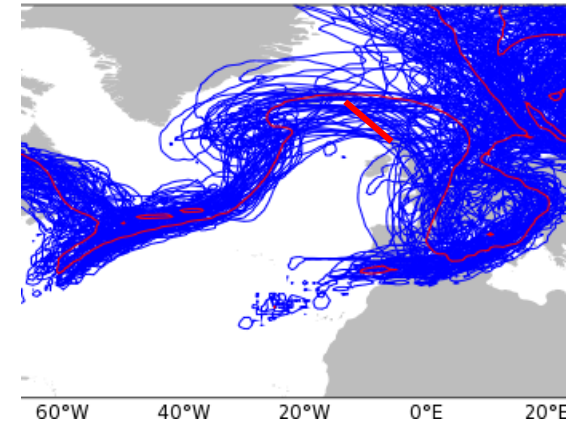
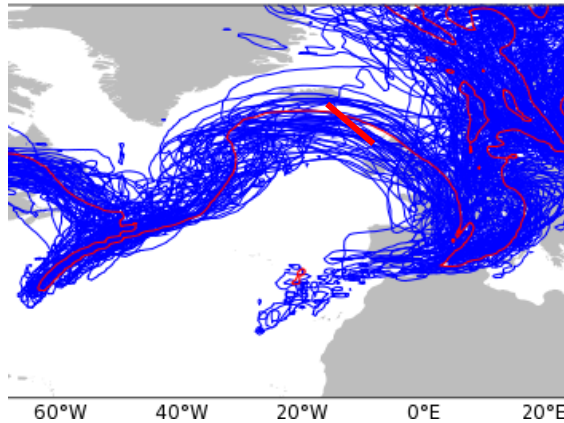
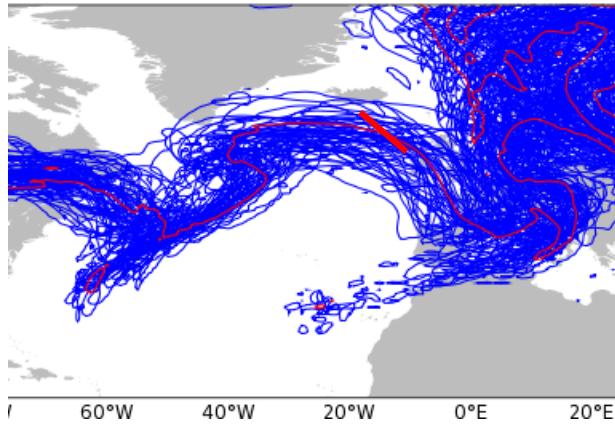


Trajectory start and SLP VT: 20160915_12
WCB outflow and PV@250hPa VT: 20160917_12



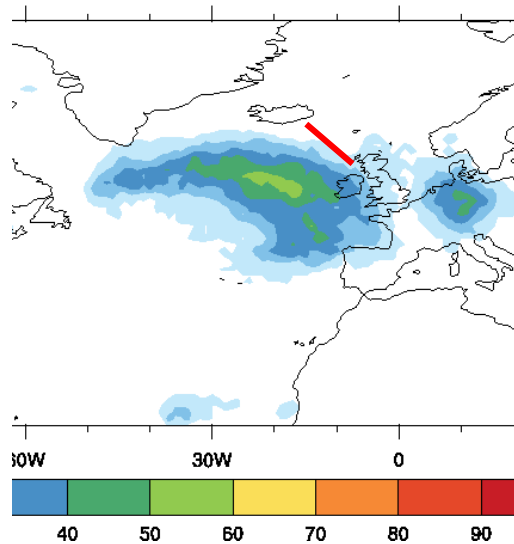
Overview model consistency Sat 17/12Z ECMWF Ensemble

JTC



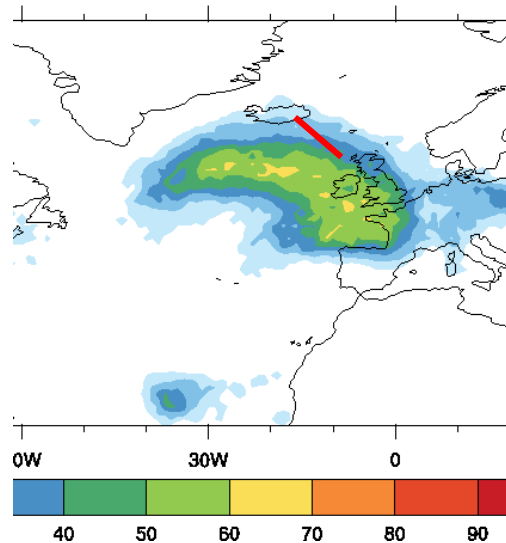
BT 12/12Z

ECM
BT 2
VT 2



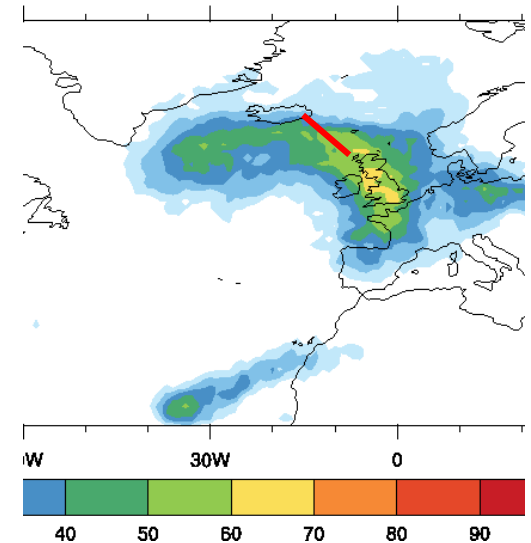
BT 13/00Z

ECM
BT 2
VT 2



BT 13/12Z

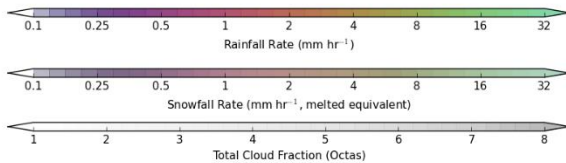
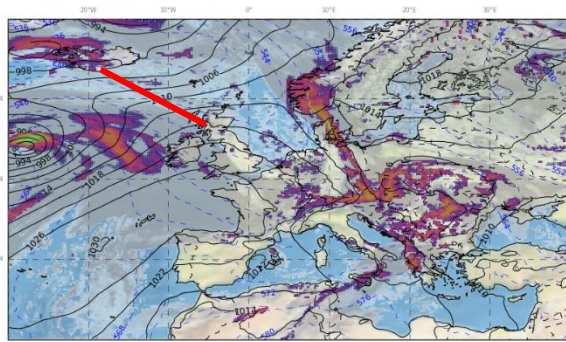
ECM
BT 2
VT 2



Overview model consistency Sat 17/12Z UKMO



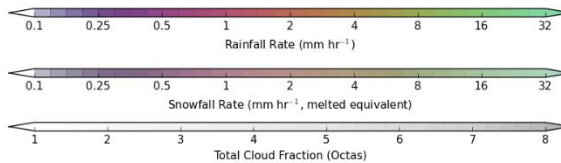
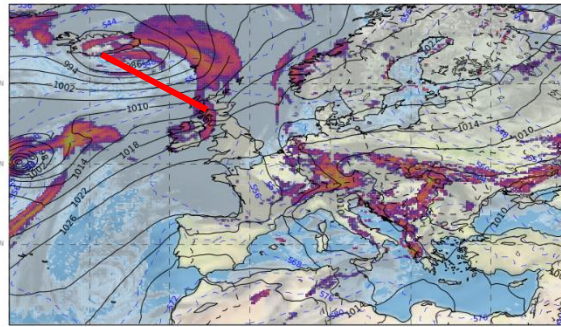
Met Office Oper. Global: P_{total} , 500hPa Thickness, Precip Rates, Cloud
2016/09/17 12Z T+120 from 2016/09/12 12Z



BT 12/12Z



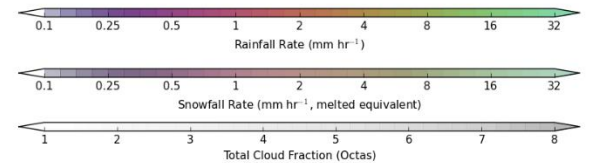
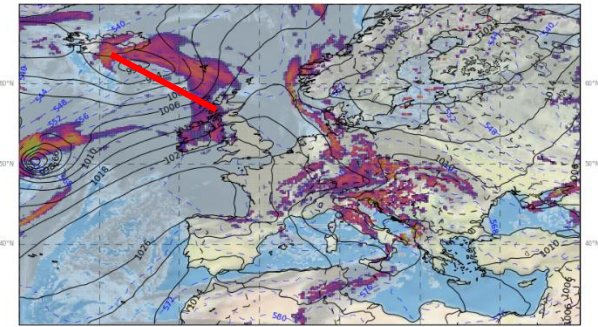
Met Office Oper. Global: P_{total} , 500hPa Thickness, Precip Rates, Cloud
2016/09/17 12Z T+108 from 2016/09/13 00Z



BT 13/00Z



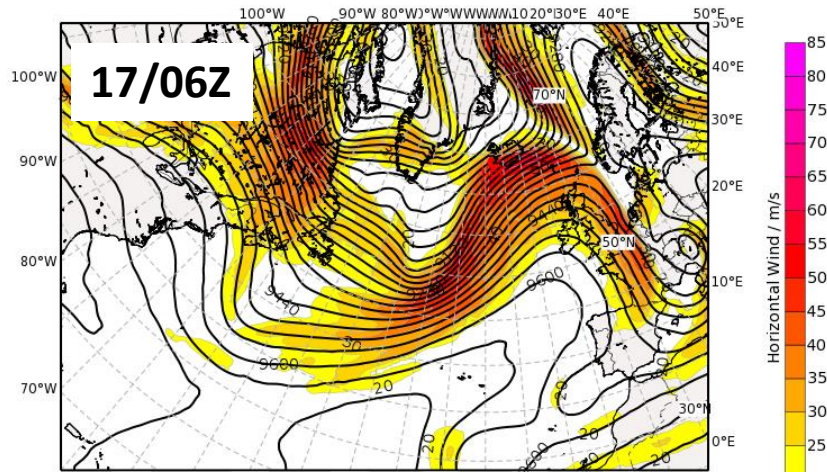
Met Office Oper. Global: P_{total} , 500hPa Thickness, Precip Rates, Cloud
2016/09/17 12Z T+96 from 2016/09/13 12Z



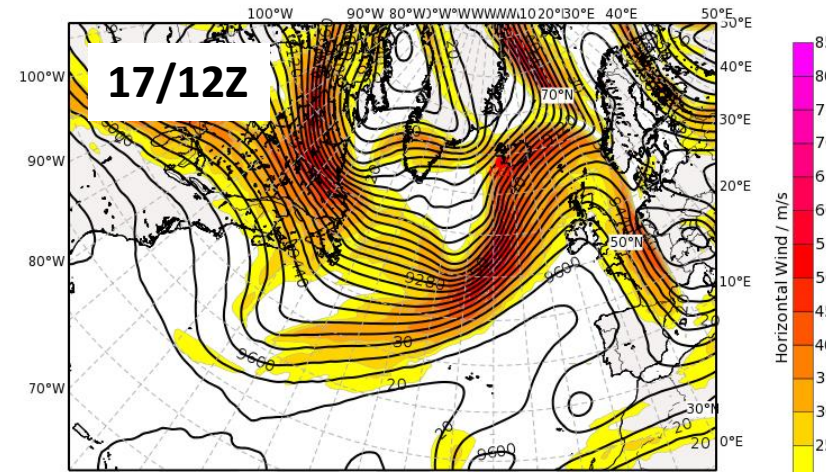
BT 13/12Z

Flight planning Saturday 17 Sep 2016

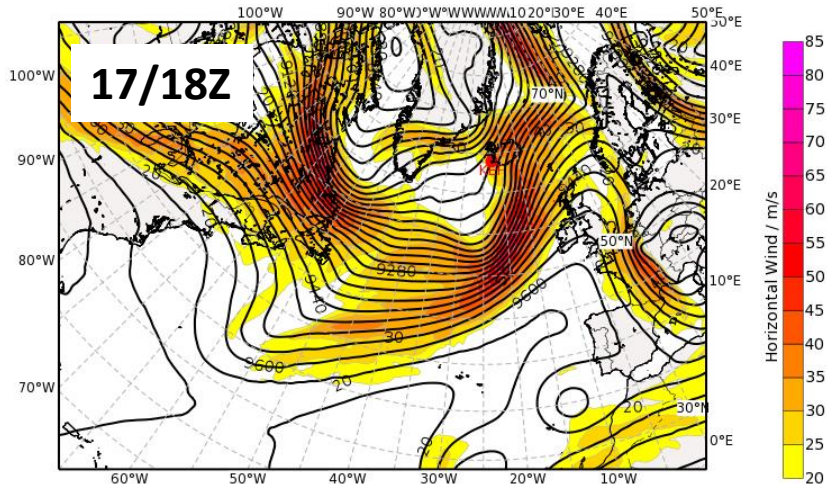
Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa
Valid: Sat, 17 Sep 2016, 06 UTC (step 078 h from Wed, 14 Sep 2016, 00 UTC)



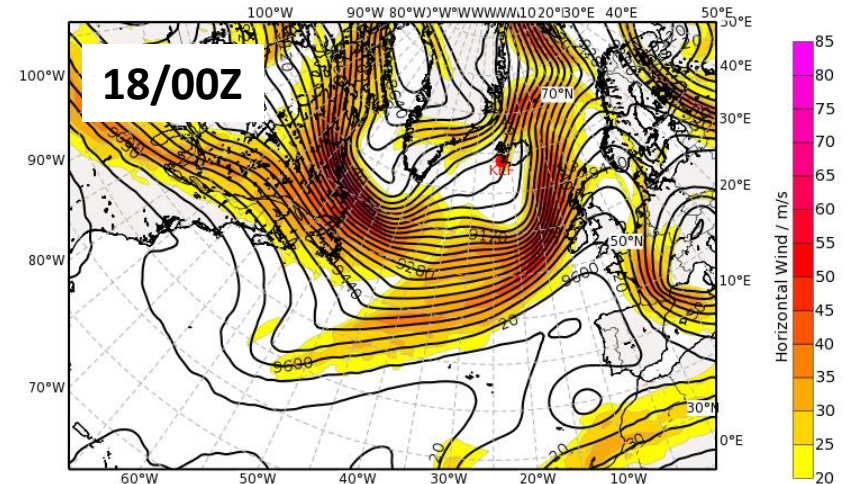
Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa
Valid: Sat, 17 Sep 2016, 12 UTC (step 084 h from Wed, 14 Sep 2016, 00 UTC)



Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa
Valid: Sat, 17 Sep 2016, 18 UTC (step 090 h from Wed, 14 Sep 2016, 00 UTC)



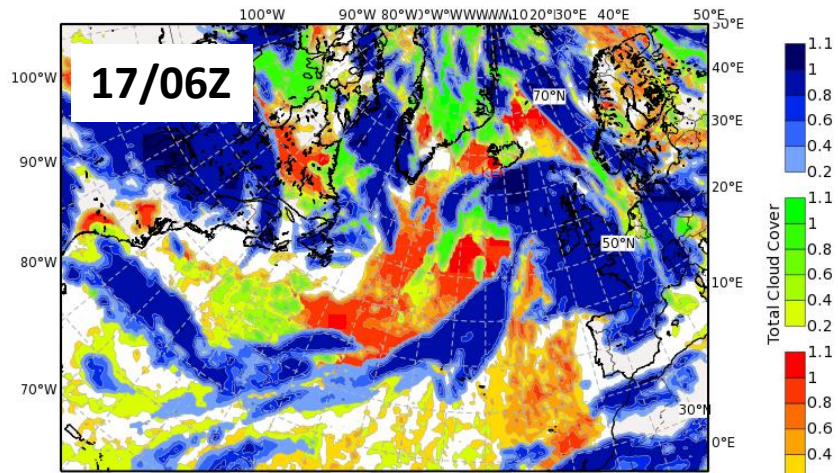
Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa
Valid: Sun, 18 Sep 2016, 00 UTC (step 096 h from Wed, 14 Sep 2016, 00 UTC)



Flight planning Saturday 17 Sep 2016

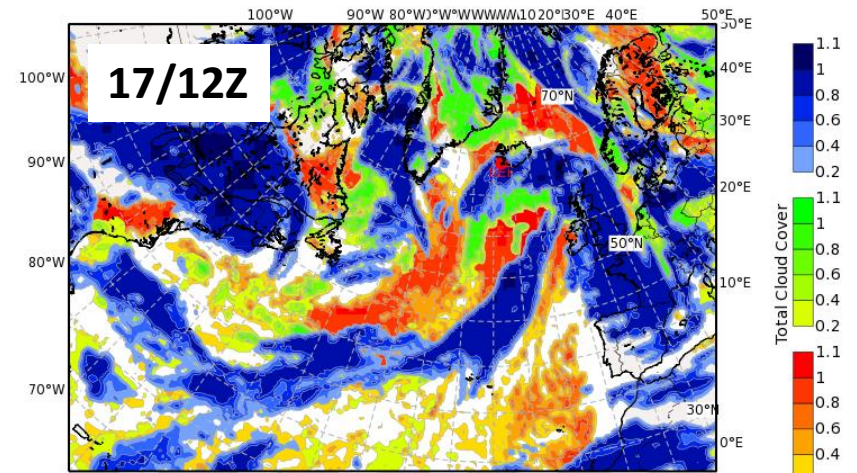
Total Cloud Cover

Valid: Sat, 17 Sep 2016, 06 UTC (step 078 h from Wed, 14 Sep 2016, 00 UTC)



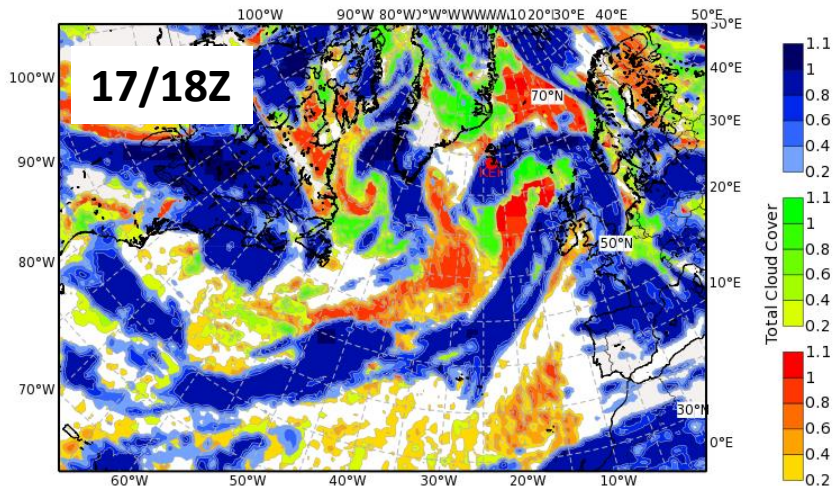
Total Cloud Cover

Valid: Sat, 17 Sep 2016, 12 UTC (step 084 h from Wed, 14 Sep 2016, 00 UTC)



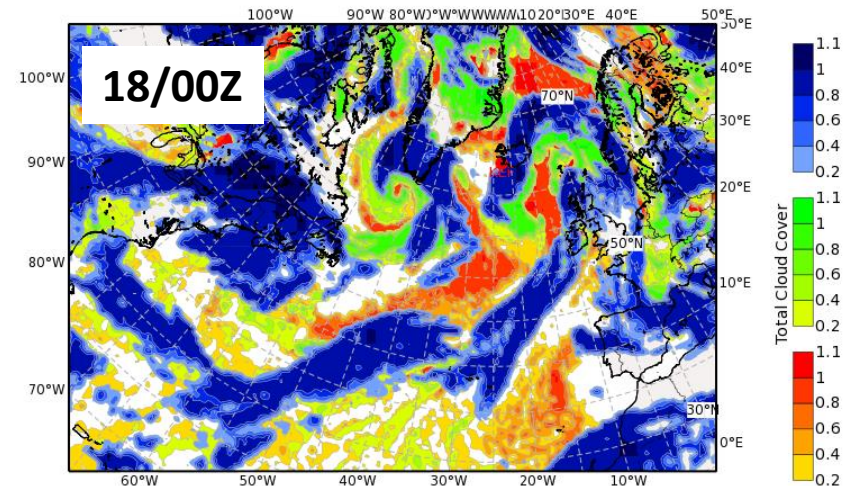
Total Cloud Cover

Valid: Sat, 17 Sep 2016, 18 UTC (step 090 h from Wed, 14 Sep 2016, 00 UTC)



Total Cloud Cover

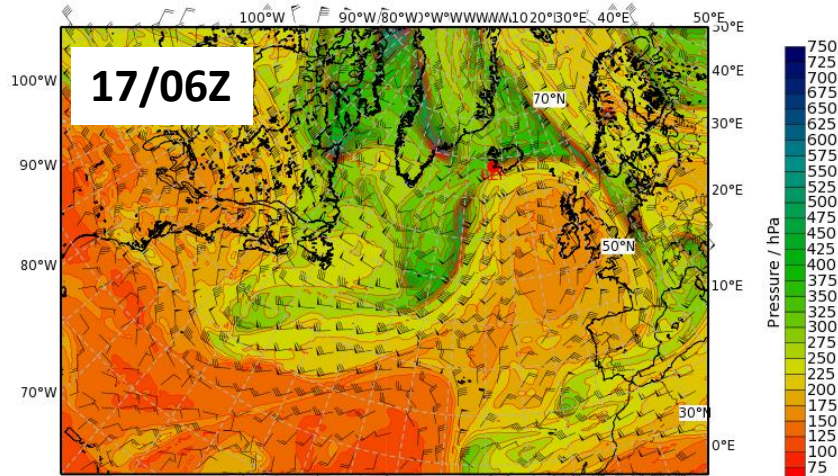
Valid: Sun, 18 Sep 2016, 00 UTC (step 096 h from Wed, 14 Sep 2016, 00 UTC)



Flight planning Saturday 17 Sep 2016

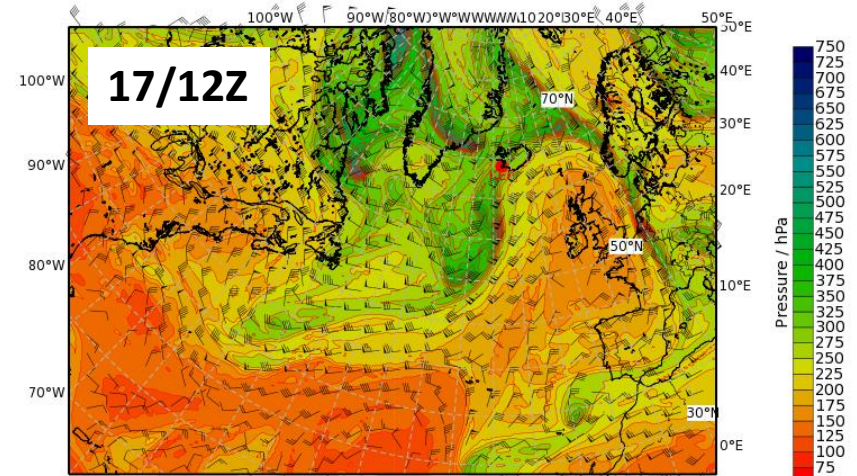
Pressure (hPa) at Dynamical Tropopause

Valid: Sat, 17 Sep 2016, 06 UTC (step 078 h from Wed, 14 Sep 2016, 00 UTC)



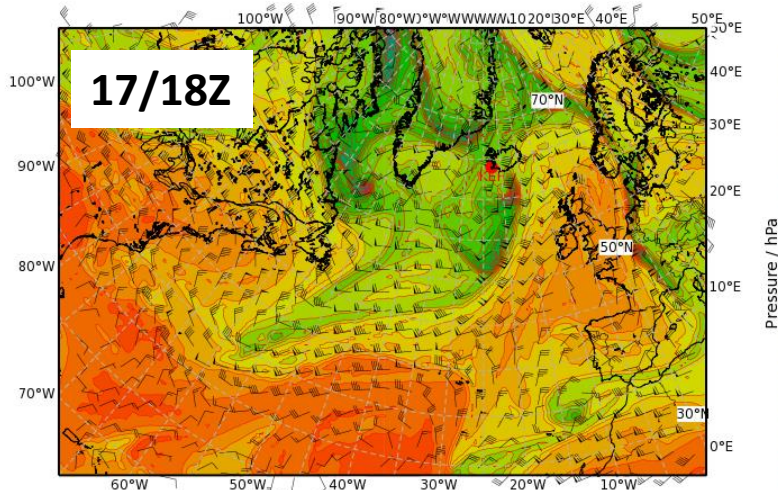
Pressure (hPa) at Dynamical Tropopause

Valid: Sat, 17 Sep 2016, 12 UTC (step 084 h from Wed, 14 Sep 2016, 00 UTC)



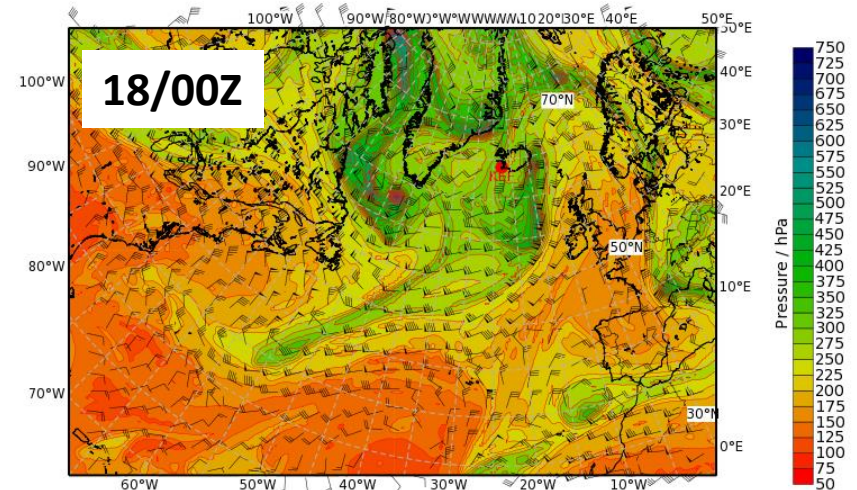
Pressure (hPa) at Dynamical Tropopause

Valid: Sat, 17 Sep 2016, 18 UTC (step 090 h from Wed, 14 Sep 2016, 00 UTC)

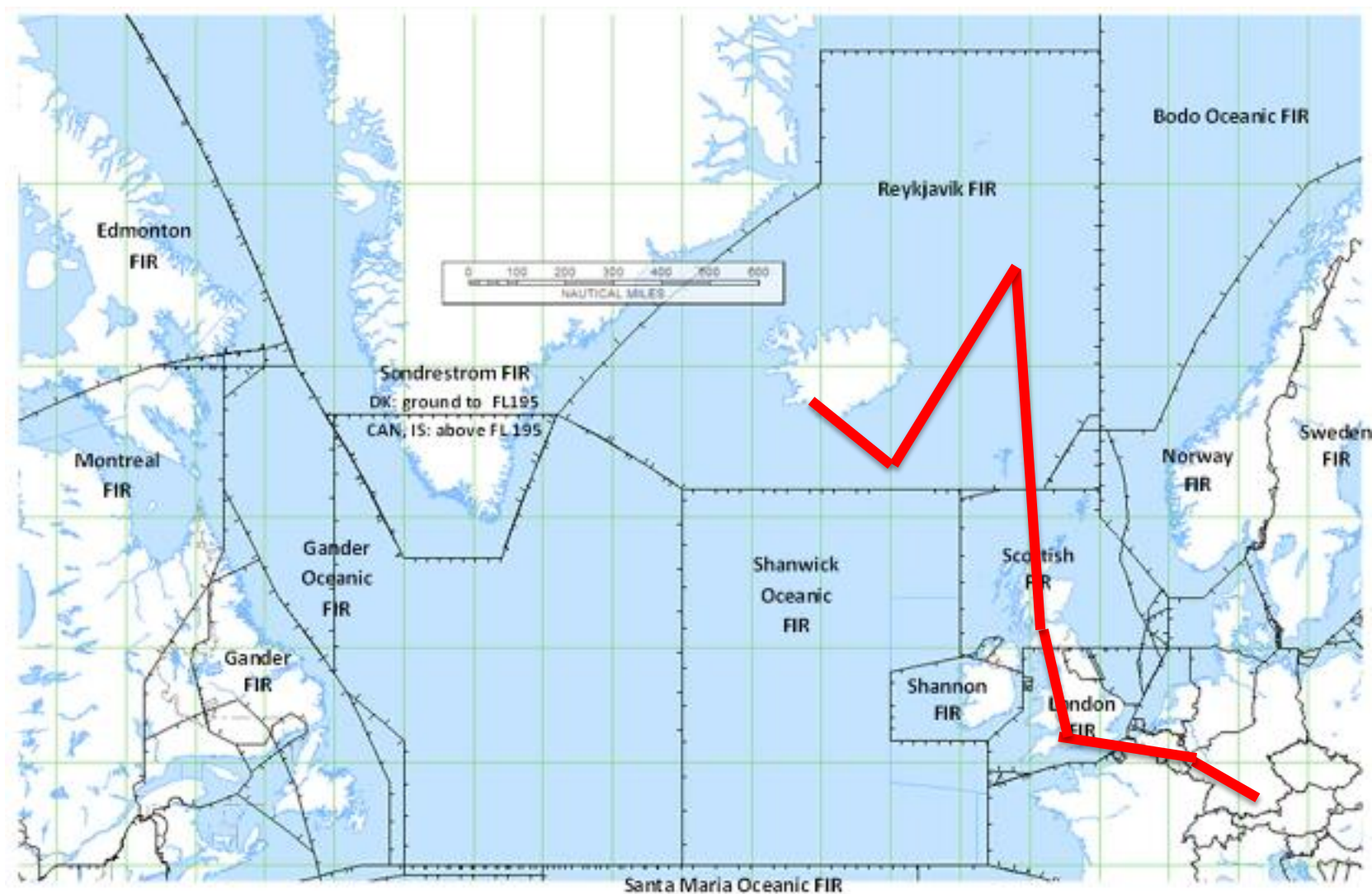


Pressure (hPa) at Dynamical Tropopause

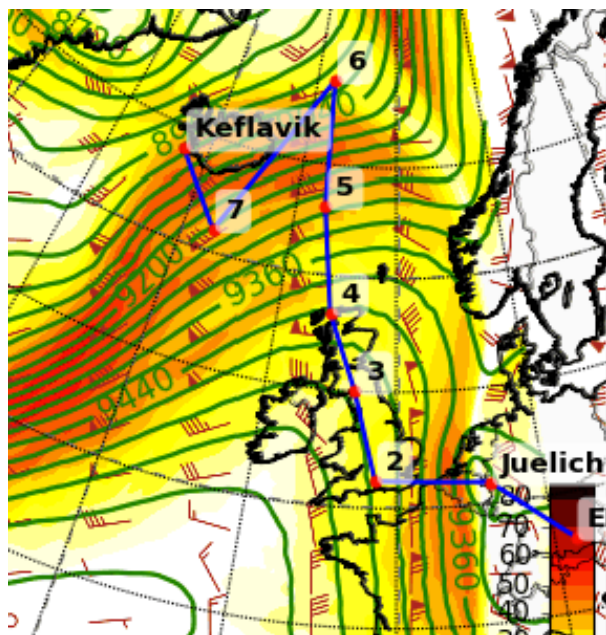
Valid: Sun, 18 Sep 2016, 00 UTC (step 096 h from Wed, 14 Sep 2016, 00 UTC)



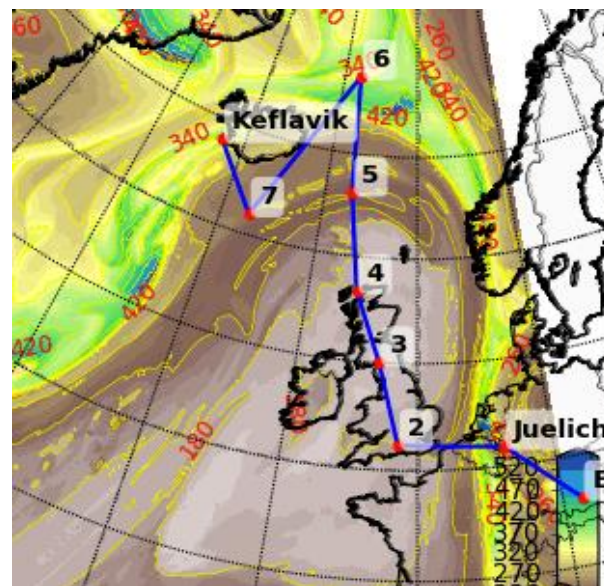
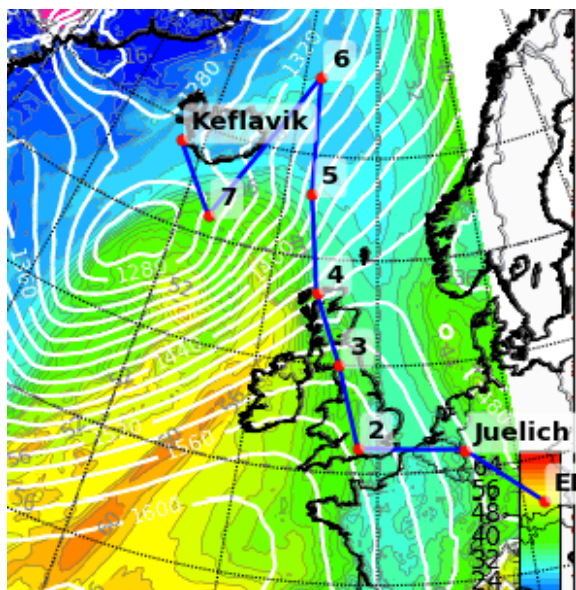
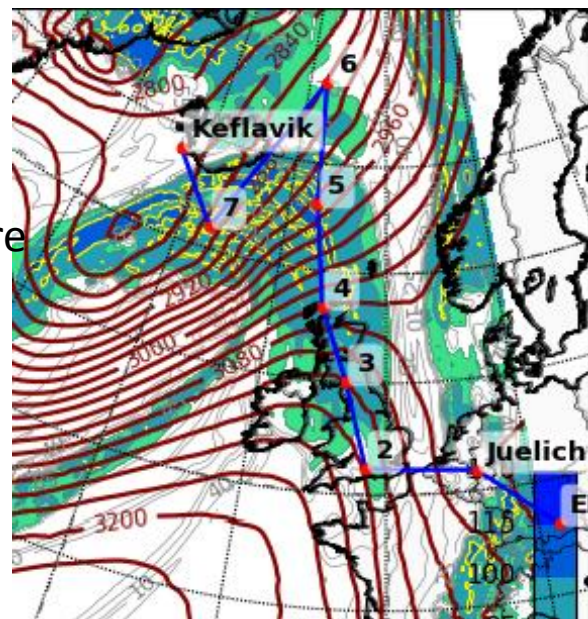
Flight route and Air spaces



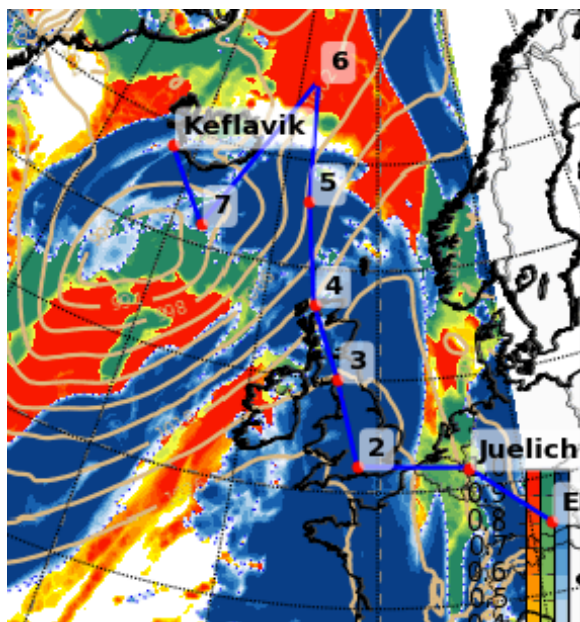
Flight planning Saturday 17 Sep 2016 12 UTC (fc bt 14/00Z)



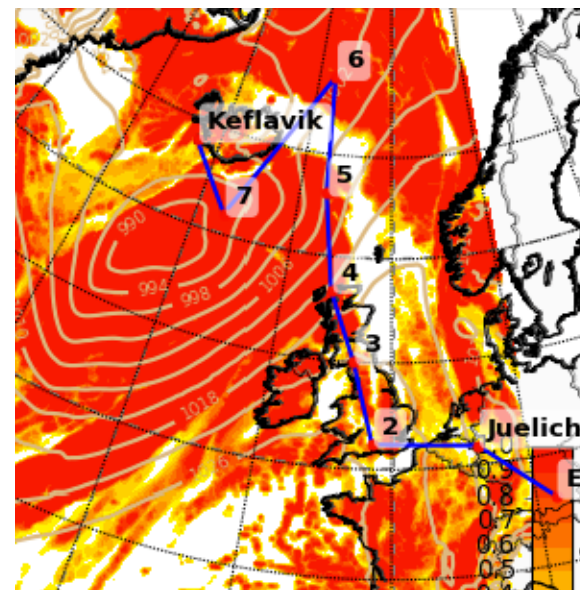
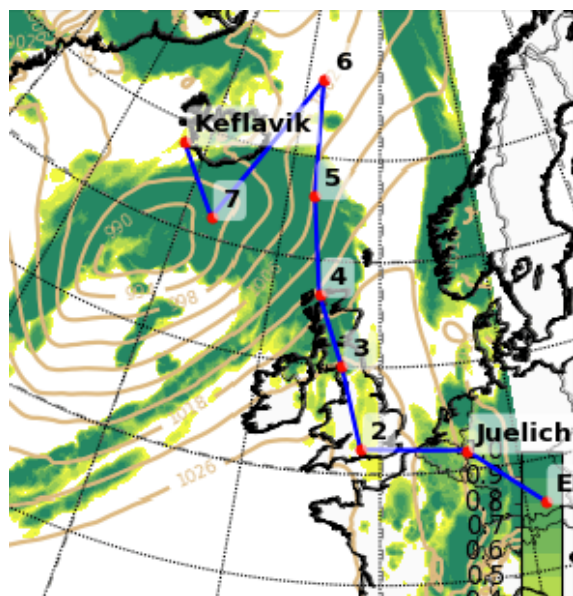
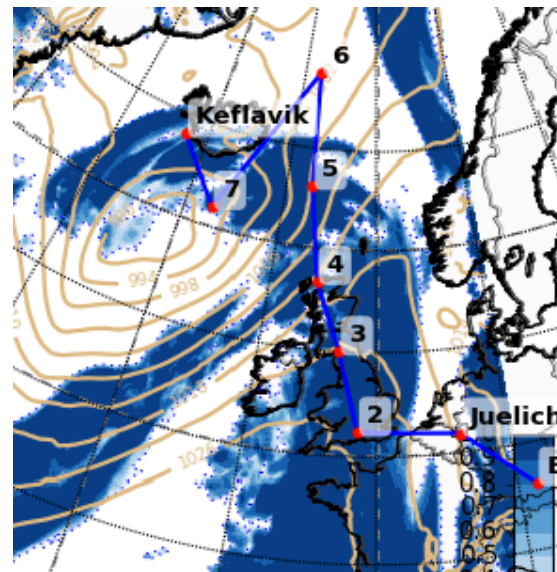
Z300, RH700
THE850, TP pressure



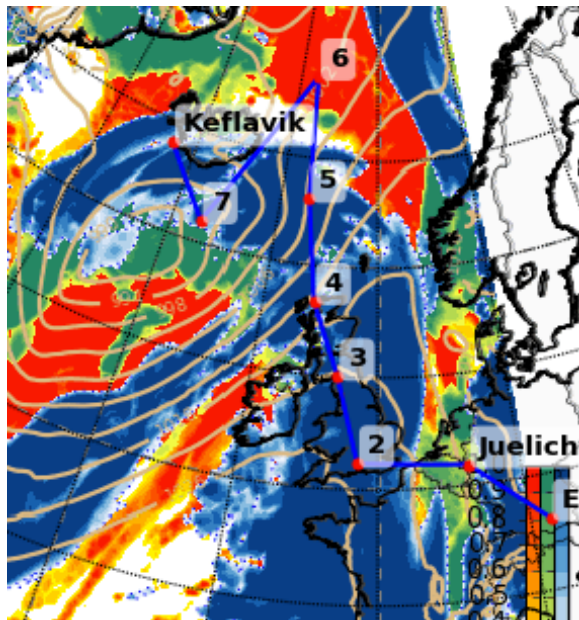
Flight planning Saturday 17 Sep 2016 12 UTC (fc bt 14/00Z)



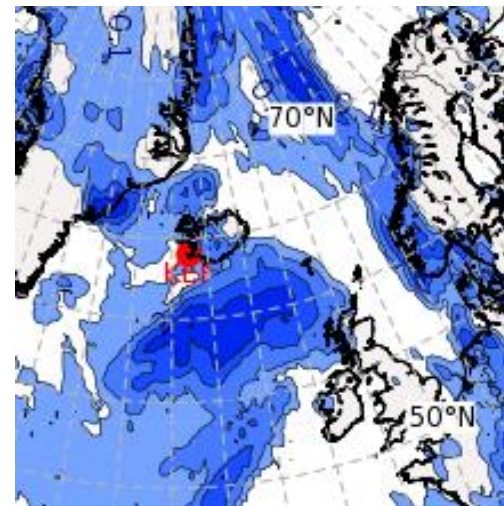
Total, high
Mid, low
clouds



Forecast for Sat, 17 Sep 2016 12 UTC



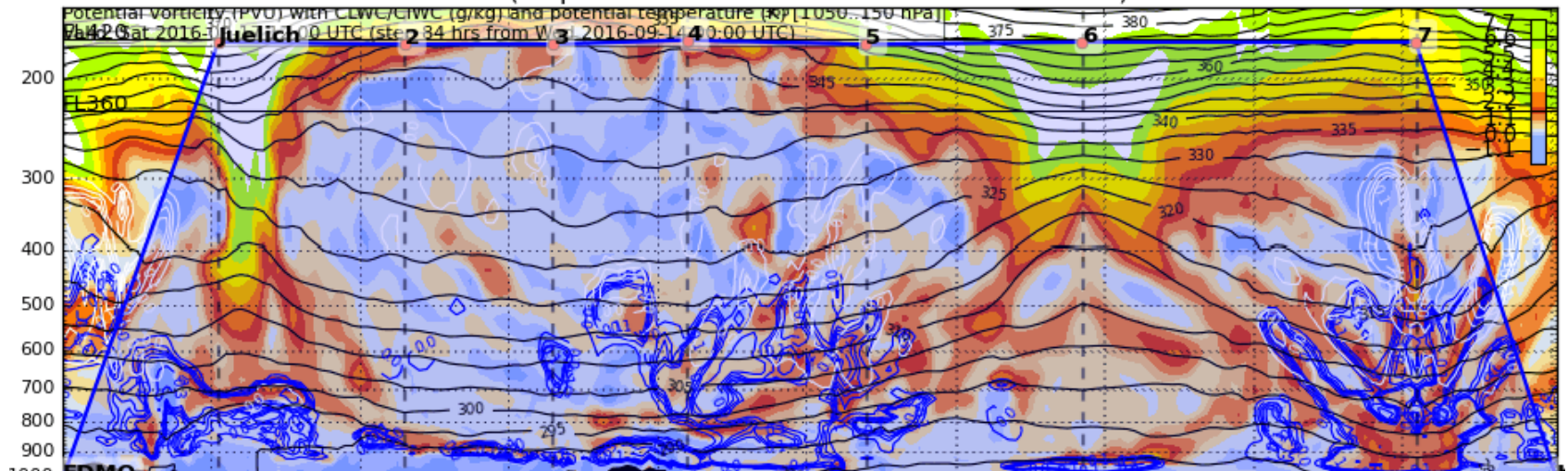
Total cloud
, 6hprecip



Flight cross section for Sat, 17 Sep 2016 12 UTC

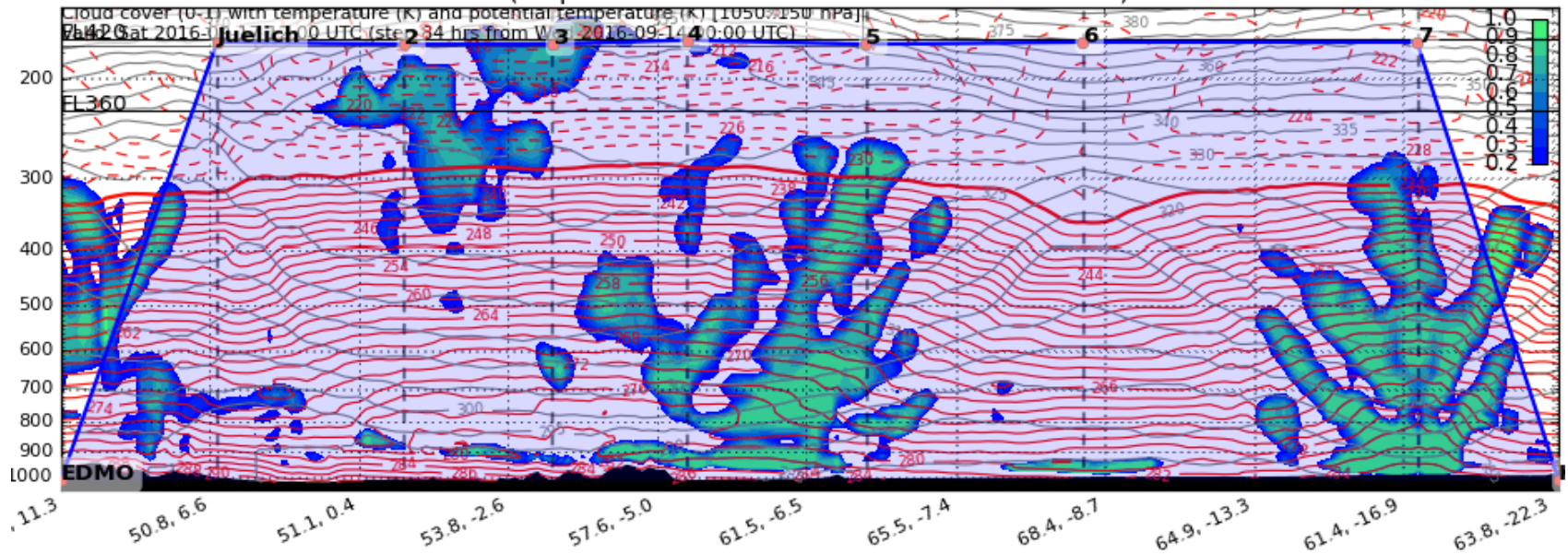
Potential Vorticity (PVU) Vertical Section (Northern Hemisphere)

Valid: Sat 2016-09-17 12:00 UTC (step 84 hrs from Wed 2016-09-14 00:00 UTC)



Cloud Cover (0-1) Vertical Section

Valid: Sat 2016-09-17 12:00 UTC (step 84 hrs from Wed 2016-09-14 00:00 UTC)

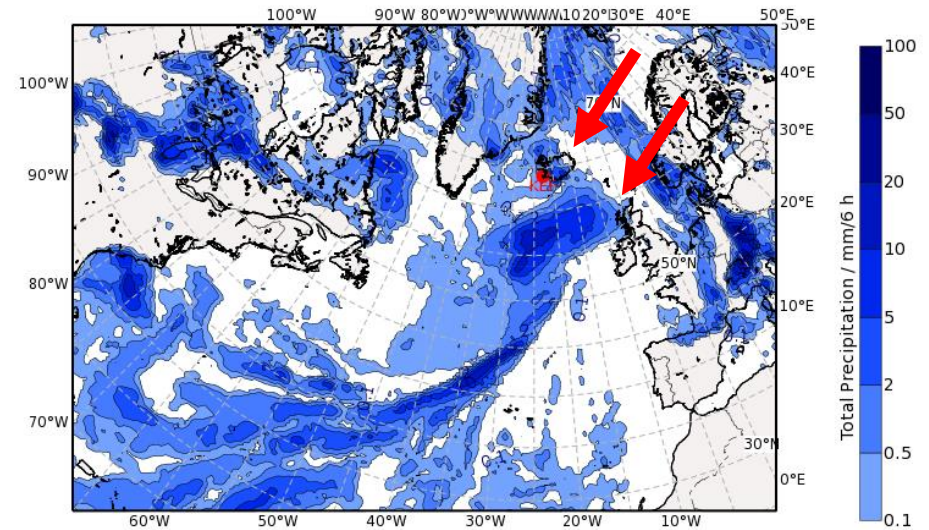


Flight coordinates for Sat, 17 Sep 2016 12 UTC

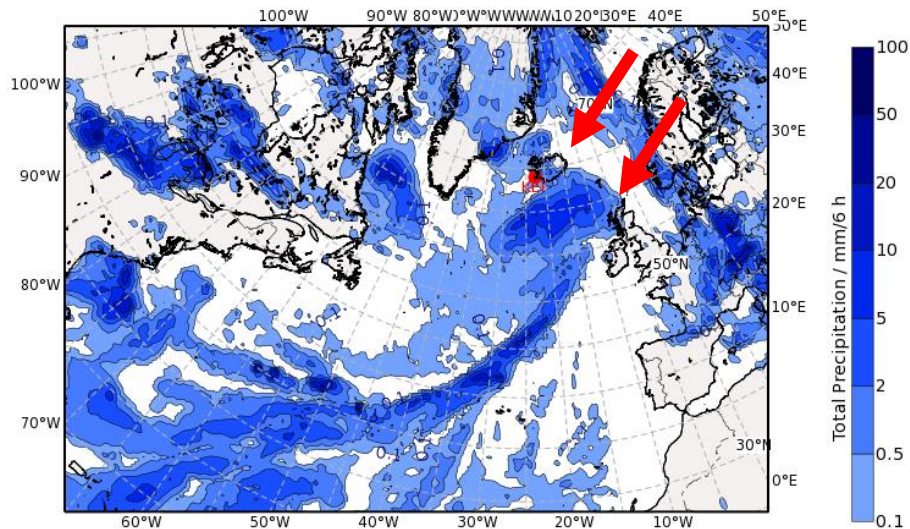
	Location	Lat (+-90)	Lon (+-180)	Flightlevel	Pressure (hPa)				Leg dist. (km [nm])	Cum. dist. (km [nm])				Comments
0	EDMO	48.08	11.28	0	1013.25				0.0 [0.0]	0.0 [0.0]				
1	Juelich	50.92	6.36	417.381812016	172.51				476.0 [257.0]	476.0 [257.0]				
2		51.156	-1.438		173.97				547.3 [295.5]	1023.4 [552.6]				
3		55	-3.15		173.97				442.9 [239.1]	1466.2 [791.7]				
4		58.36	-5.58		171.06				402.6 [217.4]	1868.9 [1009.1]				
5		63.06	-7.09	415.629431899	173.97				530.1 [286.2]	2399.0 [1295.3]				
6		68.87	-7.83	417.381812016	172.51				648.7 [350.3]	3047.7 [1645.6]				
7		61	-17.23		172.51				981.1 [529.7]	4028.8 [2175.4]				
8	Keflavik	63.998	-22.566	0	1013.25				432.5 [233.5]	4461.2 [2408.9]				

flight planning Sat 17/12Z: precipitation

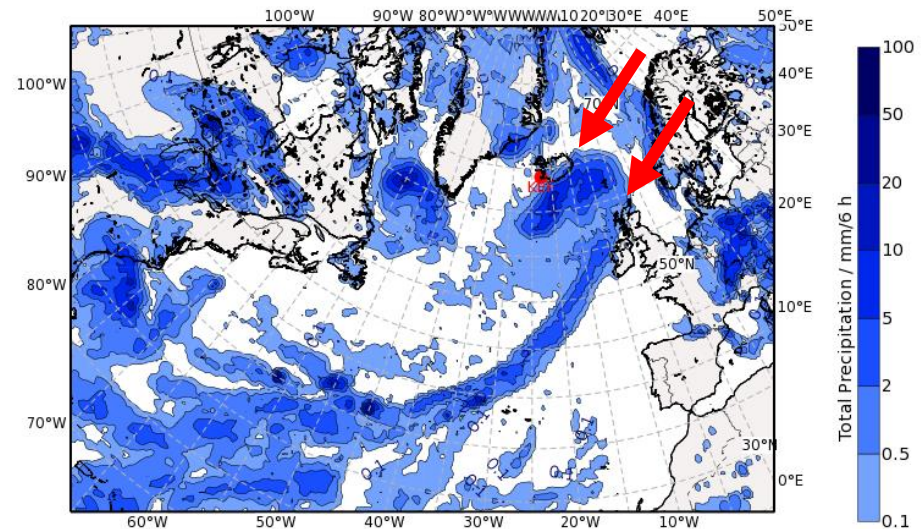
Total Precipitation, accumulated over 6 hours prior to valid time (mm)
Valid: Sat, 17 Sep 2016, 06 UTC (step 078 h from Wed, 14 Sep 2016, 00 UTC)



Total Precipitation, accumulated over 6 hours prior to valid time (mm)
Valid: Sat, 17 Sep 2016, 12 UTC (step 084 h from Wed, 14 Sep 2016, 00 UTC)



Total Precipitation, accumulated over 6 hours prior to valid time (mm)
Valid: Sat, 17 Sep 2016, 18 UTC (step 090 h from Wed, 14 Sep 2016, 00 UTC)



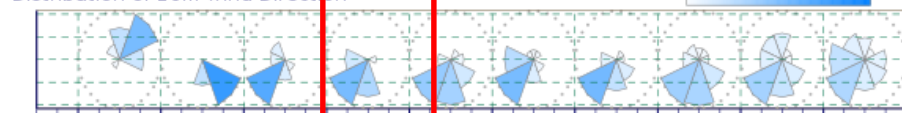
flight planning Sat 17/12Z: wave diagram southern Sea Point

Wave ENSgram

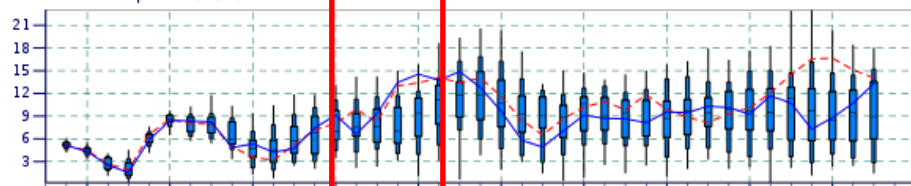
60.52°N 4.21°W (ENS sea point)

High resolution forecast and ENS distribution Tuesday 13 September 2016 12 UTC

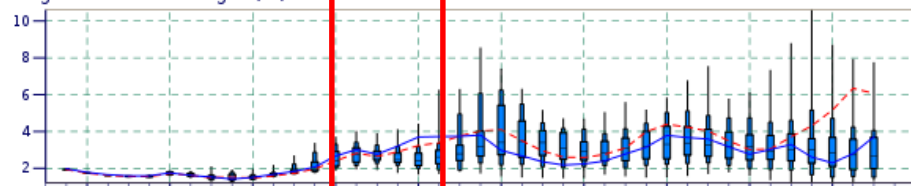
Distribution of 10m Wind Direction



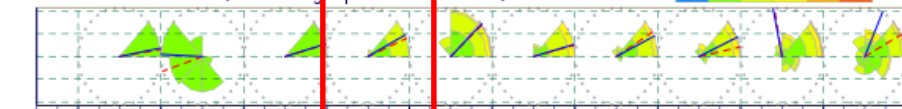
10m Wind Speed (m/s)



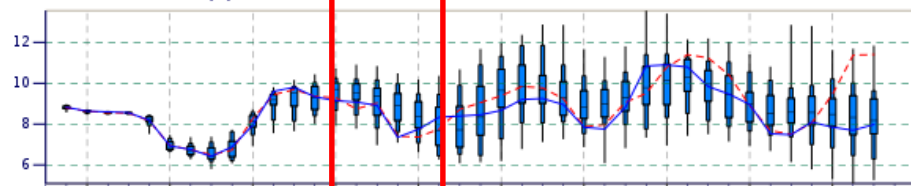
Significant wave height (m)



Mean Wave Direction (oceanographic convention)

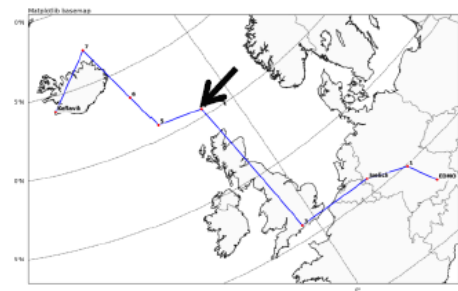


Mean Wave Period (s)

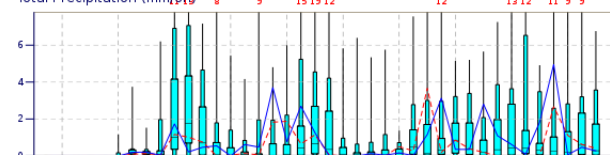


Tue 13
Sep
2016
Wed 14
Thu 15
Fri 16
Sat 17
Sun 18
Mon 19
Tue 20
Wed 21
Thu 22
Fri 23

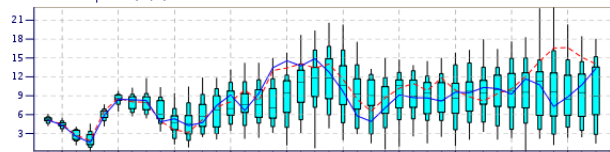
ECMWF ENS Meteogram For K7 Buoy



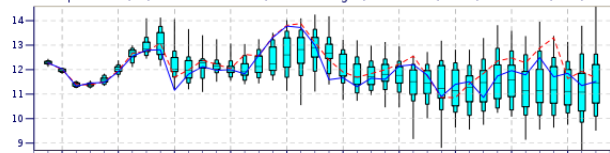
Total Precipitation (mm/6h)



10m Wind Speed (m/s)



2m Temperature(°C) reduced to 0 m (station height) from 0 m (HRES) and -1 m (ENS)



Tue 13
Sep
2016
Wed 14
Thu 15
Fri 16
Sat 17
Sun 18
Mon 19
Tue 20
Wed 21
Thu 22
Fri 23

flight planning Sat 17/12Z: wave diagram northern Sea Point

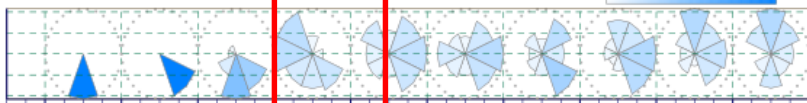
Wave ENSgram

67.12°N 15.63°W (ENS sea point)

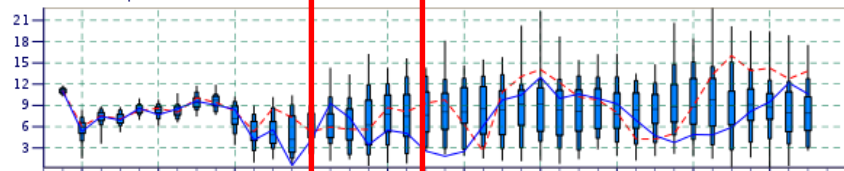
High resolution forecast and ENS distribution Tuesday 13 September 2016 12 UTC

Distribution of 10m Wind Direction

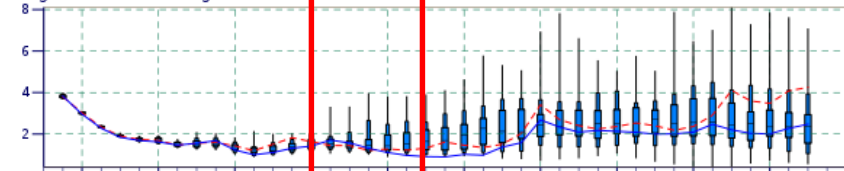
0% 25% 50% 75% 100%



10m Wind Speed (m/s)

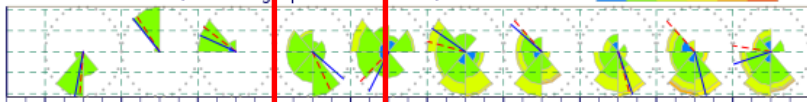


Significant wave height (m)

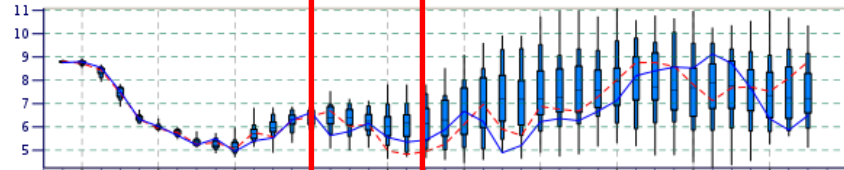


Mean Wave Direction (oceanographic convention)

1 2.5 4 6 9 m



Mean Wave Period (s)



Tue13
Sep
2016

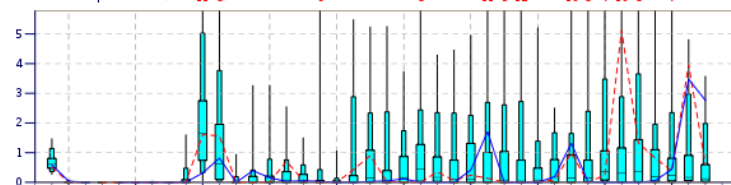
ECMWF ENS Meteogram

For K7 Buoy

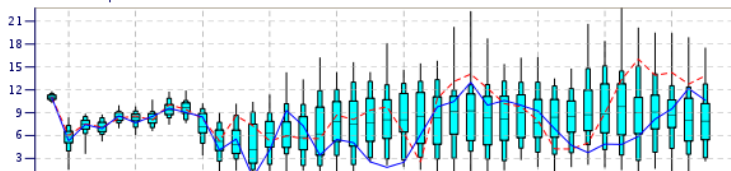


Total Precipitation (mm/6h)

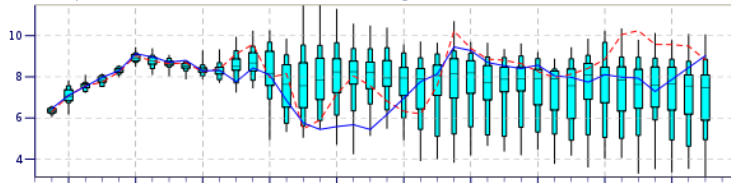
6 8 11 9 12 10 8 7 10 8 7



10m Wind Speed (m/s)



2m Temperature(°C) reduced to 0 m (station height) from 1 m (HRES) and 5 m (ENS)



Tue13
Sep
2016

flight planning Sat 17/12Z: uncertainty Z500 at sea points

ECMWF Ensemble forecasts

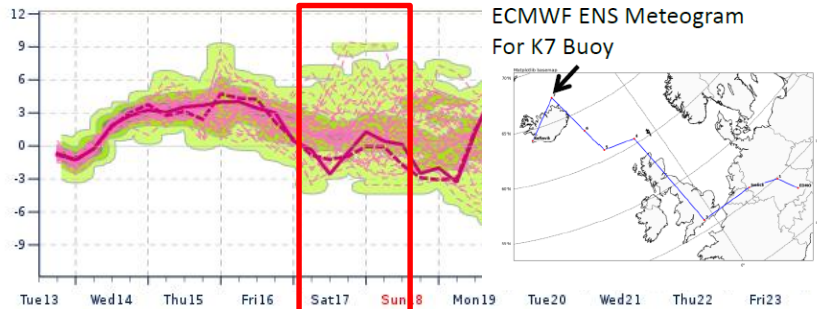
67.12°N 15.63°W (ENS sea point) 0 m

High Resolution Forecast and ENS Distribution

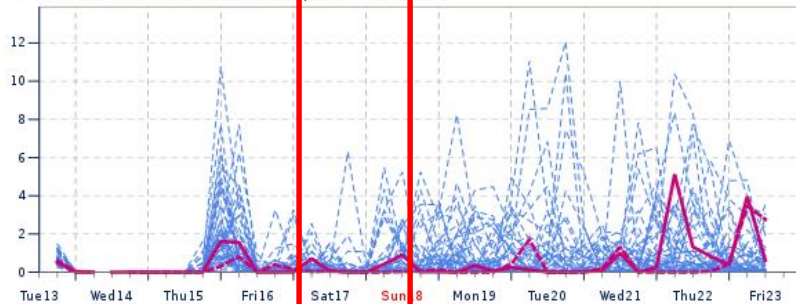
Tuesday 13 September 2016 12 UTC



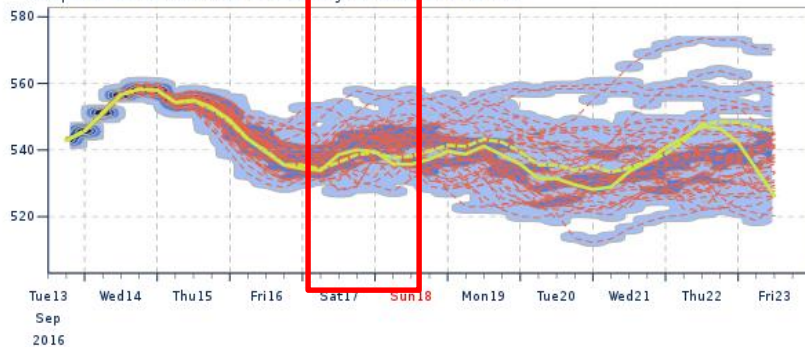
Temperature at 850 hPa - Probability for 1°C intervals



Ensemble members of Total Precipitation (mm/6h)



Geopotential at 500 hPa - Probability for 2.5dam intervals



ECMWF Ensemble forecasts

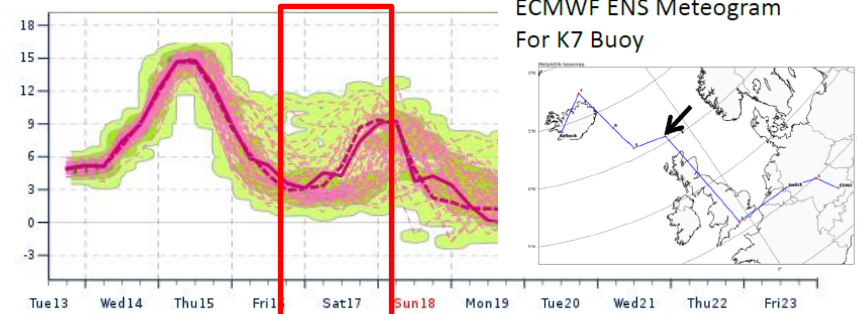
60.52°N 4.21°W (ENS sea point) 0 m

High Resolution Forecast and ENS Distribution

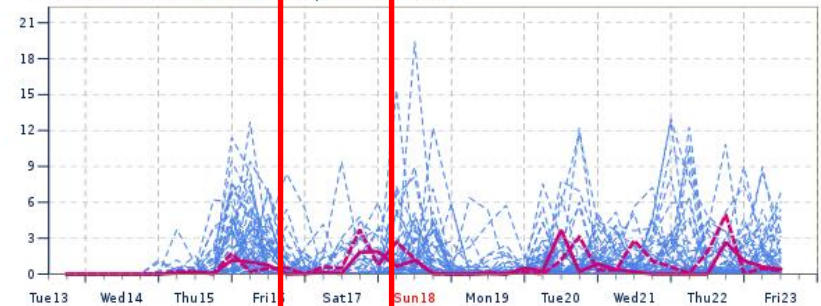
Tuesday 13 September 2016 12 UTC



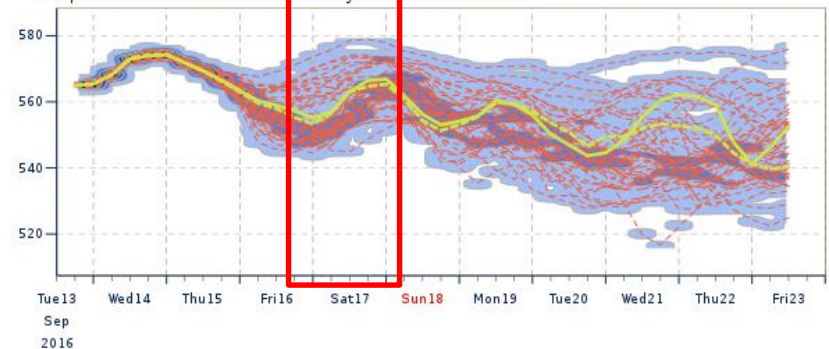
Temperature at 850 hPa - Probability for 1°C intervals



Ensemble members of Total Precipitation (mm/6h)

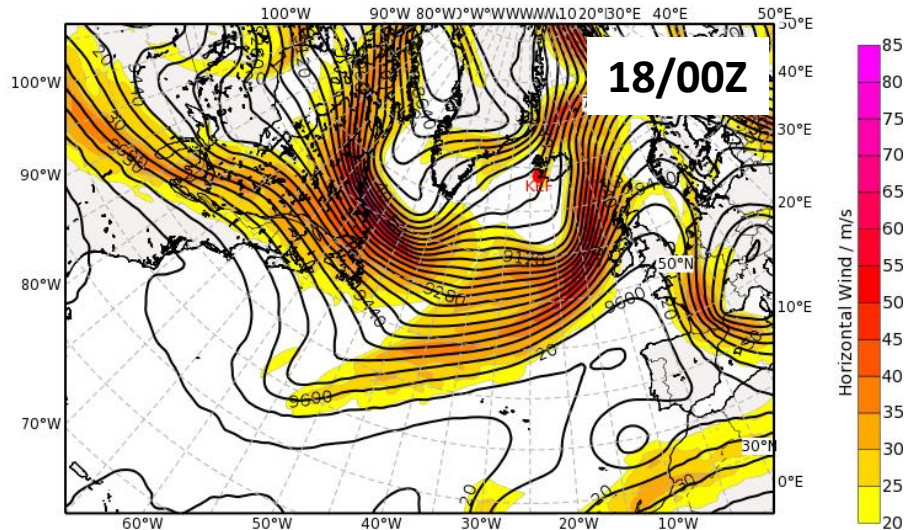


Geopotential at 500 hPa - Probability for 2.5dam intervals

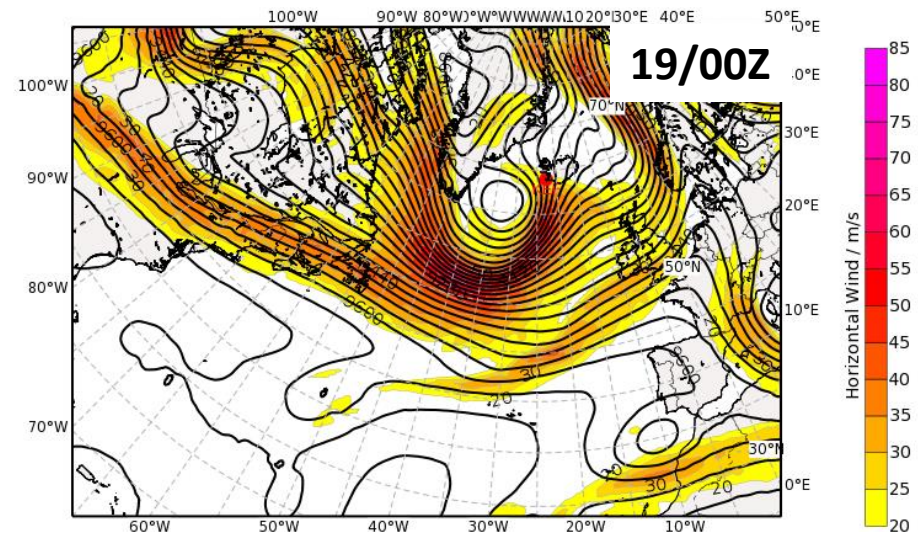


Outlook Sat 17/00Z to Wed 21/00Z : Z500 (based EC Hres 14/00Z)

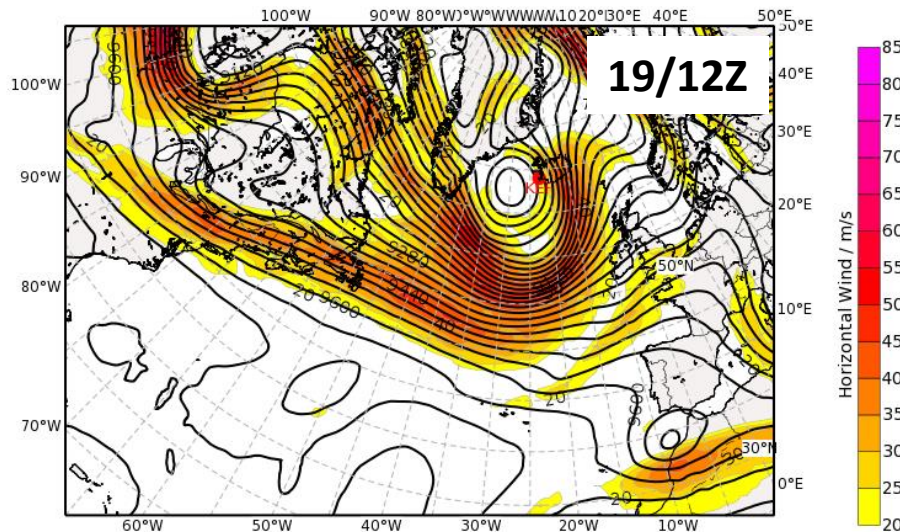
Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa
Valid: Sun, 18 Sep 2016, 00 UTC (step 096 h from Wed, 14 Sep 2016, 00 UTC)



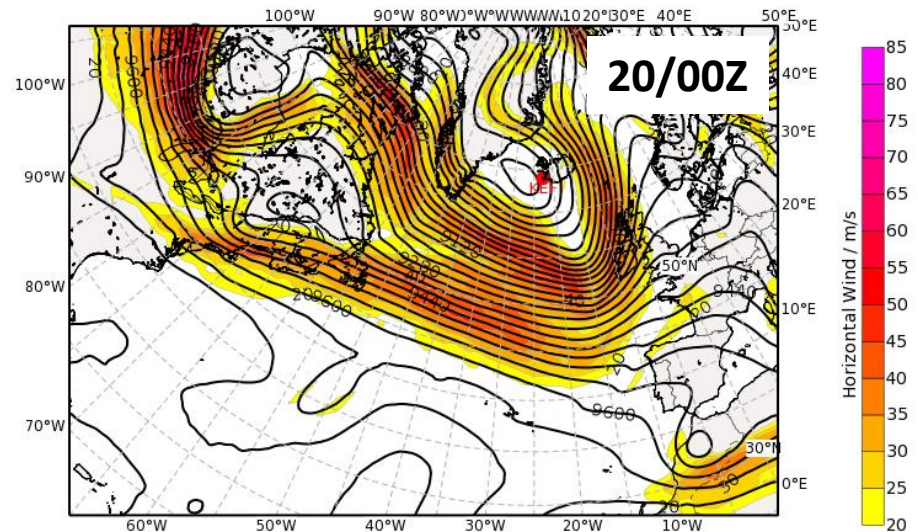
Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa
Valid: Mon, 19 Sep 2016, 00 UTC (step 120 h from Wed, 14 Sep 2016, 00 UTC)



Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa
Valid: Mon, 19 Sep 2016, 12 UTC (step 132 h from Wed, 14 Sep 2016, 00 UTC)



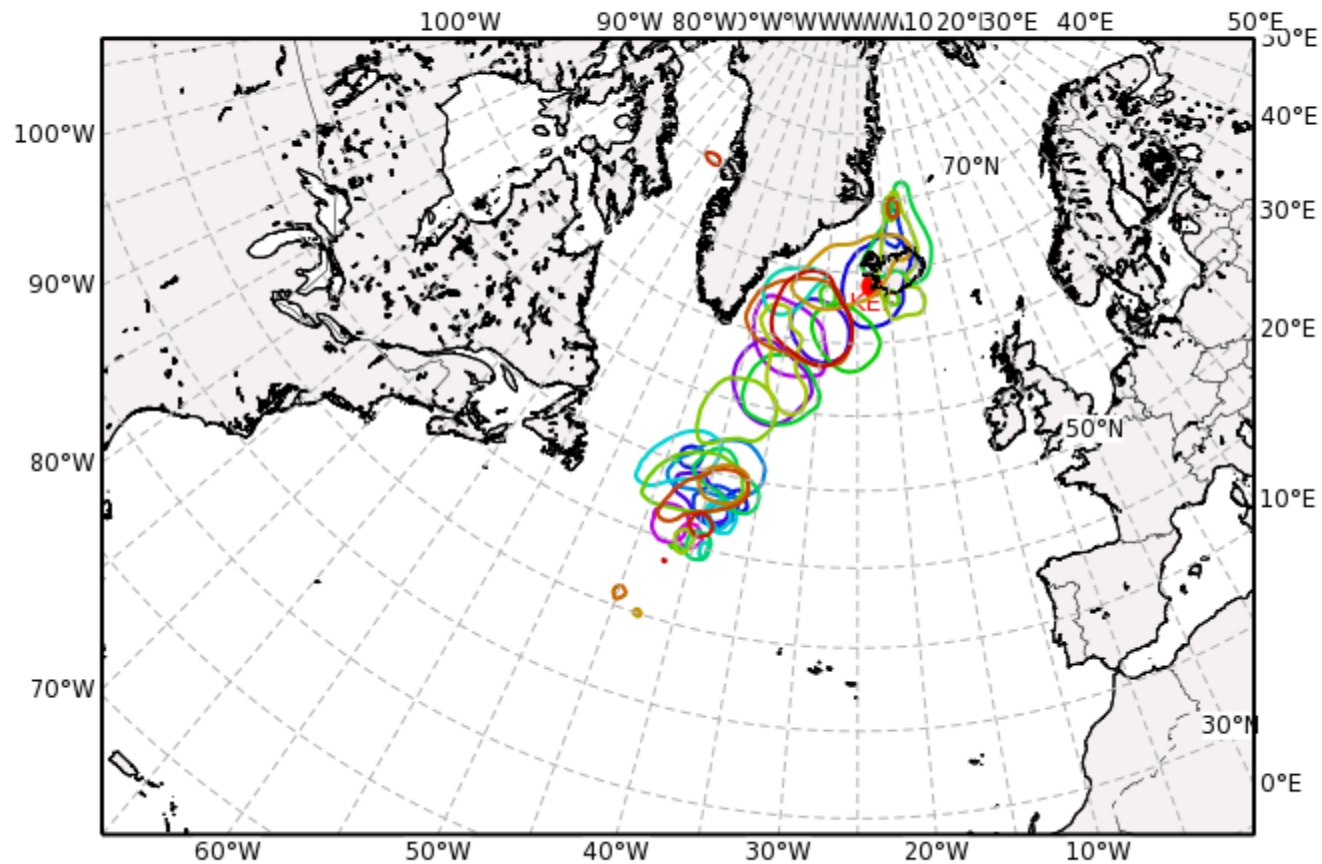
Geopotential Height (m) & Horizontal Wind (m/s) at 300 hPa
Valid: Tue, 20 Sep 2016, 00 UTC (step 144 h from Wed, 14 Sep 2016, 00 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : cyclone activity (based EC Ens 13/12Z)

ECMWF ENS MSLP (990hPa-isoline)

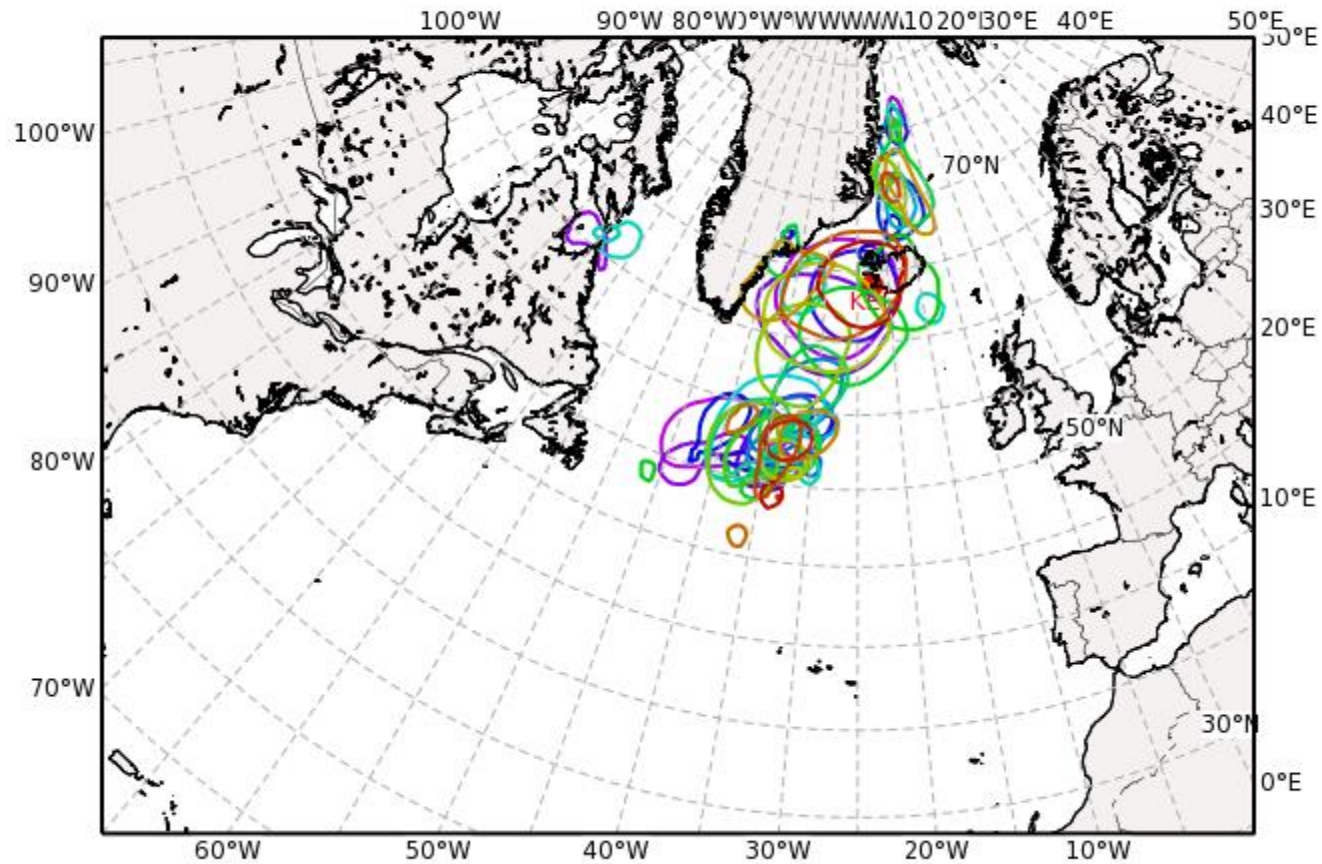
Valid: Fri, 16 Sep 2016, 12 UTC (step 072 h from Tue, 13 Sep 2016, 12 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : cyclone activity (based EC Ens 13/12Z)

ECMWF ENS MSLP (990hPa-isoline)

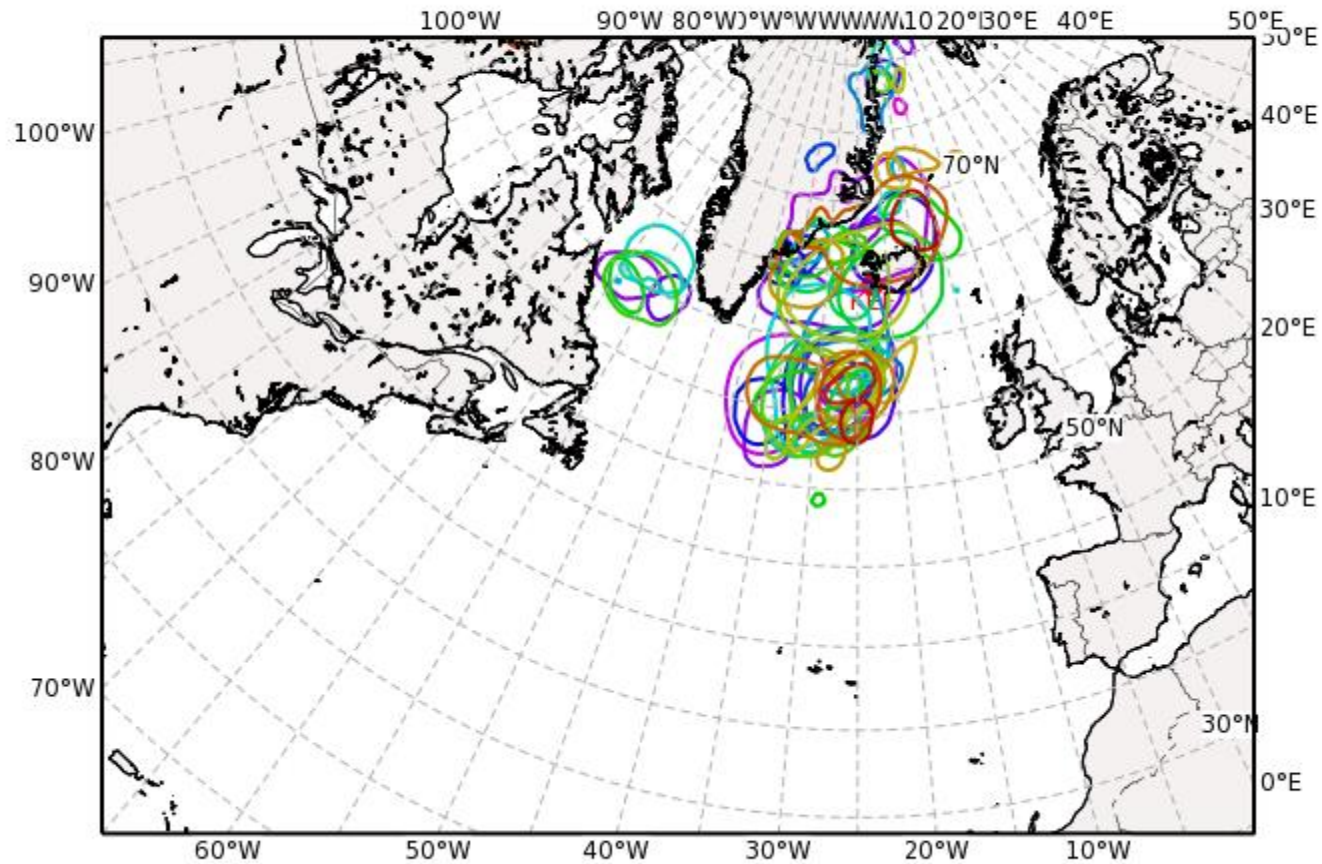
Valid: Sat, 17 Sep 2016, 00 UTC (step 084 h from Tue, 13 Sep 2016, 12 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : cyclone activity (based EC Ens 13/12Z)

ECMWF ENS MSLP (990hPa-isoline)

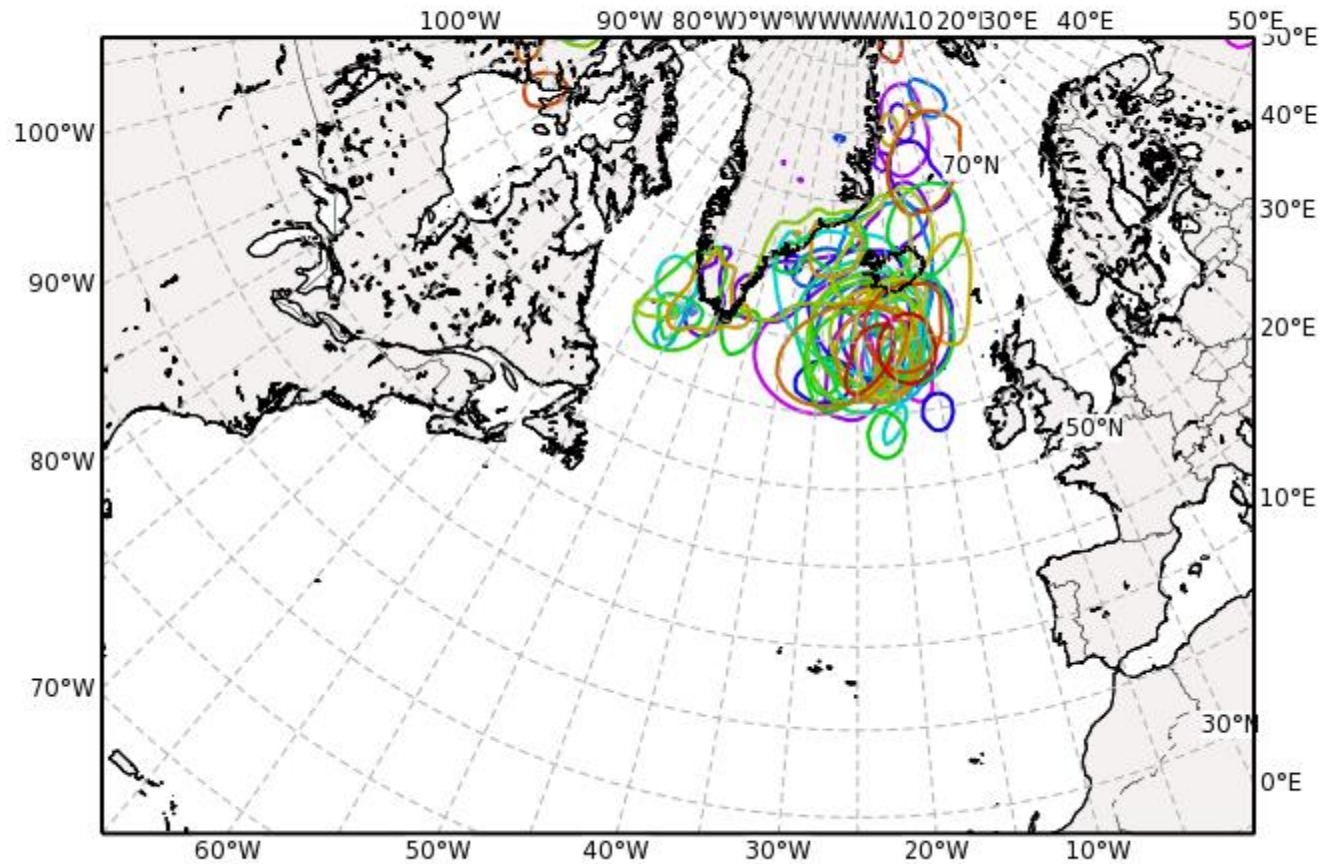
Valid: Sat, 17 Sep 2016, 12 UTC (step 096 h from Tue, 13 Sep 2016, 12 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : cyclone activity (based EC Ens 13/12Z)

ECMWF ENS MSLP (990hPa-isoline)

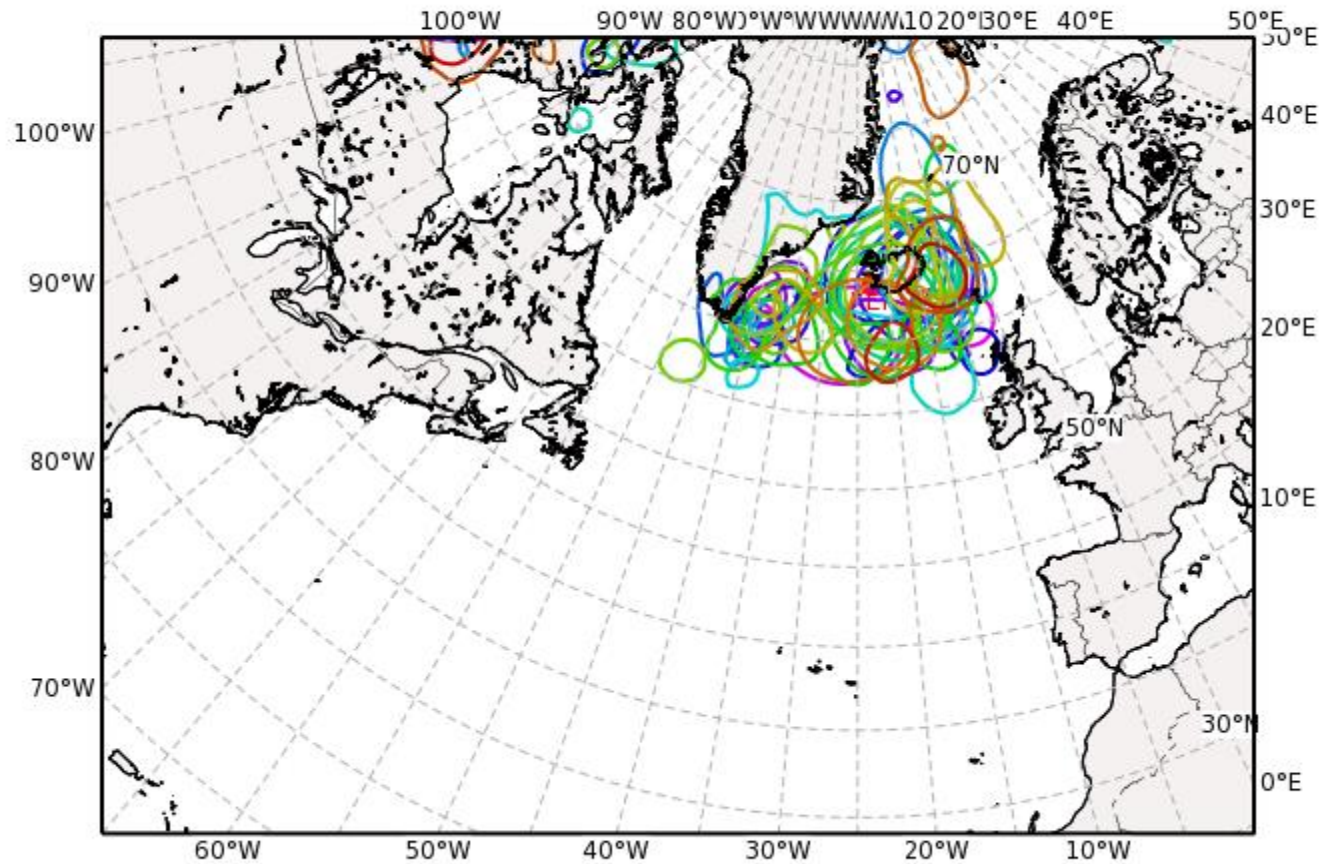
Valid: Sun, 18 Sep 2016, 00 UTC (step 108 h from Tue, 13 Sep 2016, 12 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : cyclone activity (based EC Ens 13/12Z)

ECMWF ENS MSLP (990hPa-isoline)

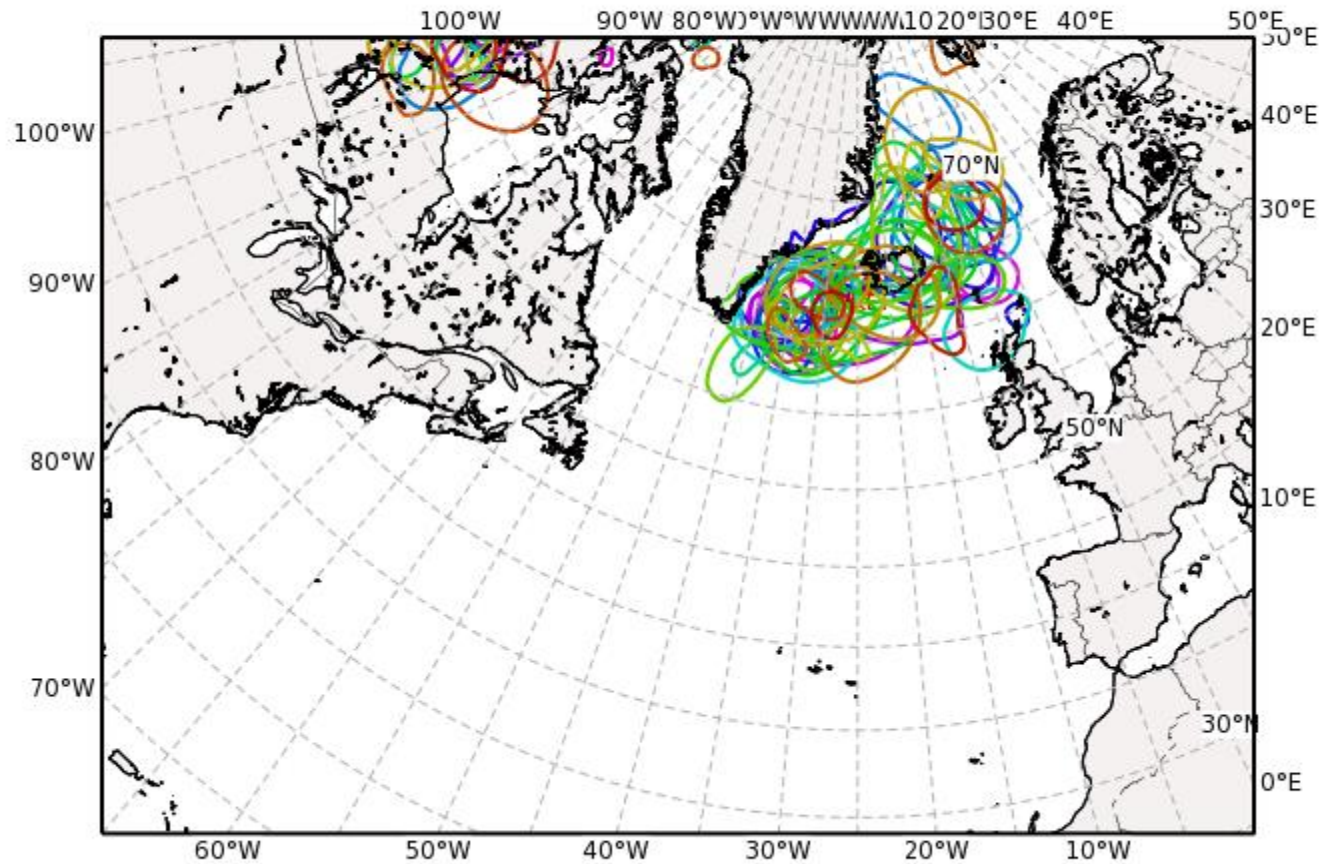
Valid: Sun, 18 Sep 2016, 12 UTC (step 120 h from Tue, 13 Sep 2016, 12 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : cyclone activity (based EC Ens 13/12Z)

ECMWF ENS MSLP (990hPa-isoline)

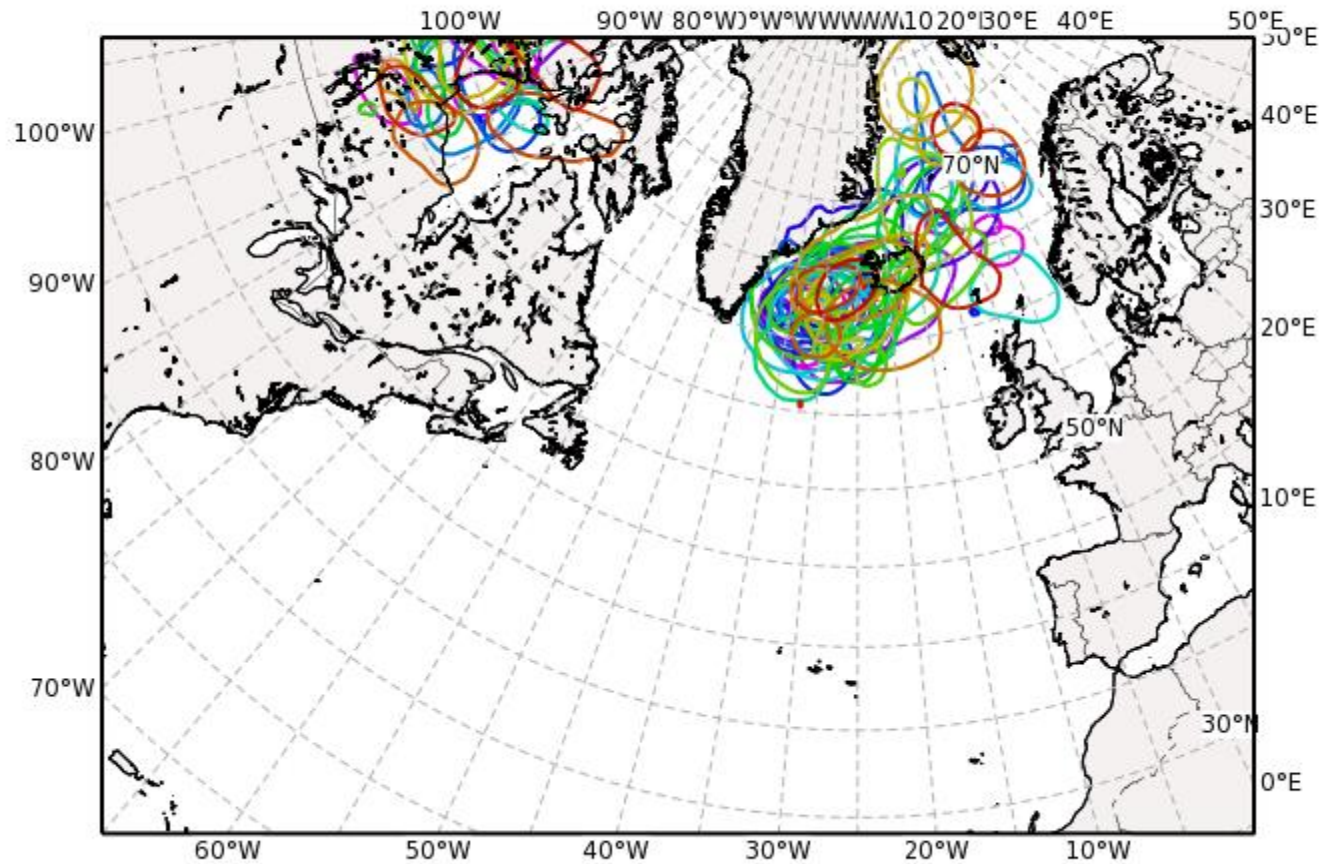
Valid: Mon, 19 Sep 2016, 00 UTC (step 132 h from Tue, 13 Sep 2016, 12 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : cyclone activity (based EC Ens 13/12Z)

ECMWF ENS MSLP (990hPa-isoline)

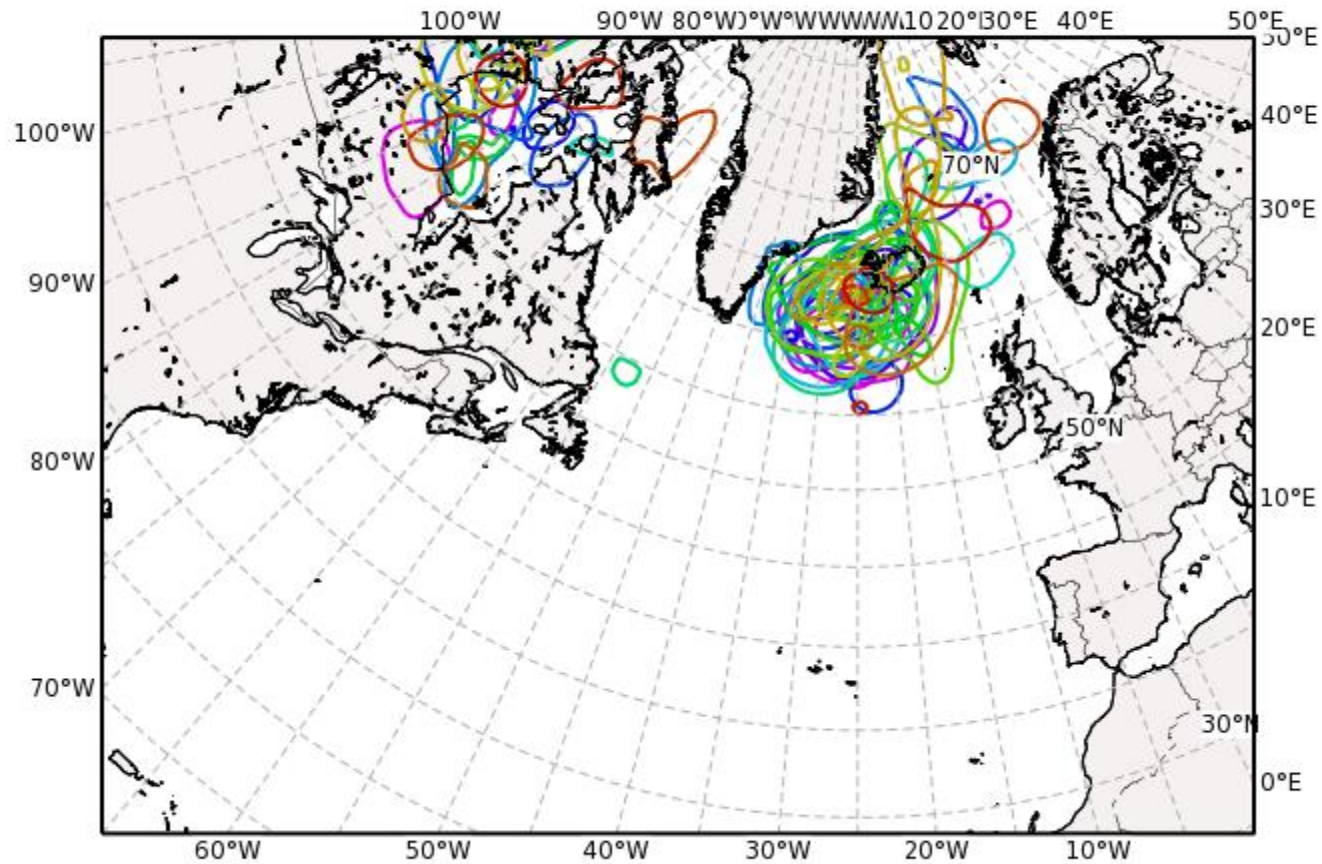
Valid: Mon, 19 Sep 2016, 12 UTC (step 144 h from Tue, 13 Sep 2016, 12 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : cyclone activity (based EC Ens 13/12Z)

ECMWF ENS MSLP (990hPa-isoline)

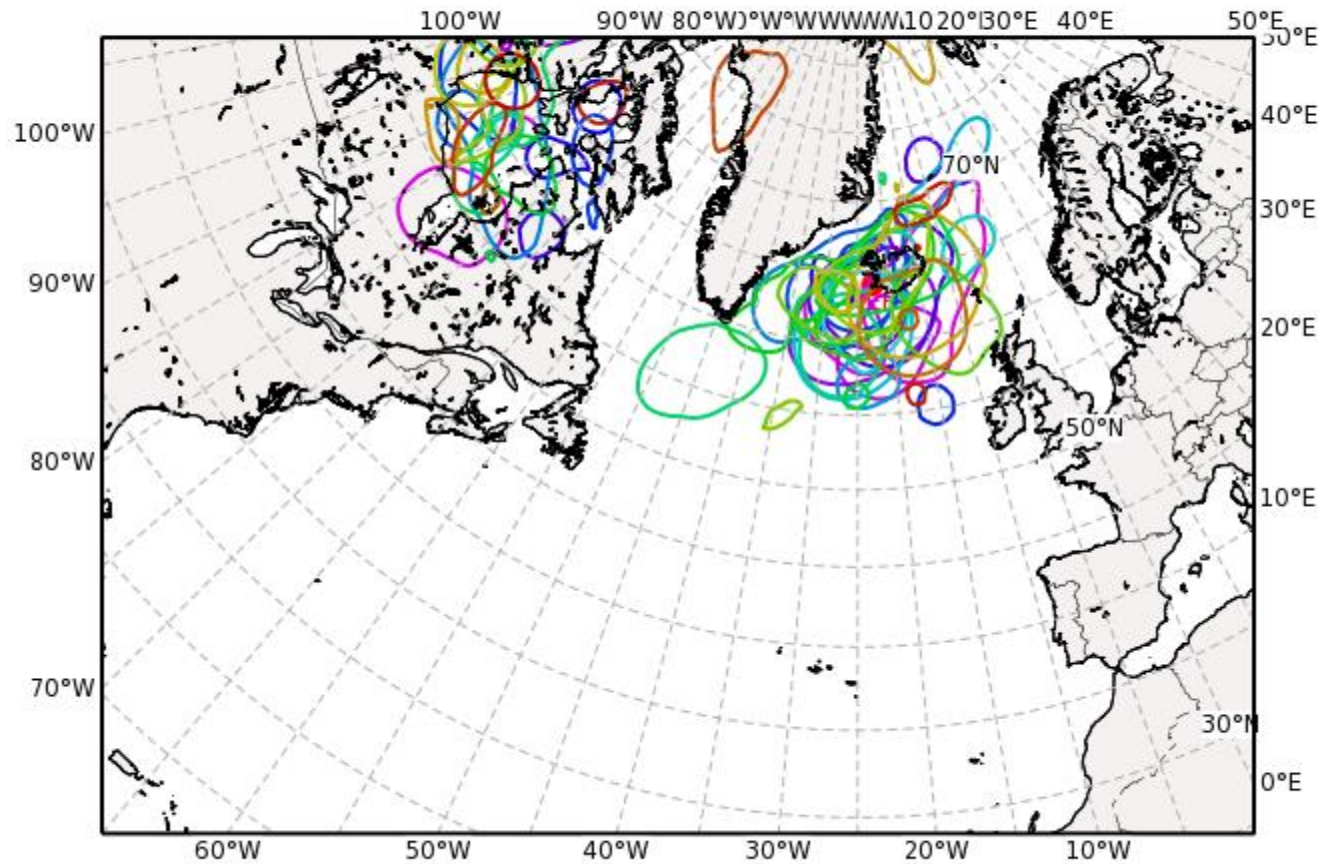
Valid: Tue, 20 Sep 2016, 00 UTC (step 156 h from Tue, 13 Sep 2016, 12 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : cyclone activity (based EC Ens 13/12Z)

ECMWF ENS MSLP (990hPa-isoline)

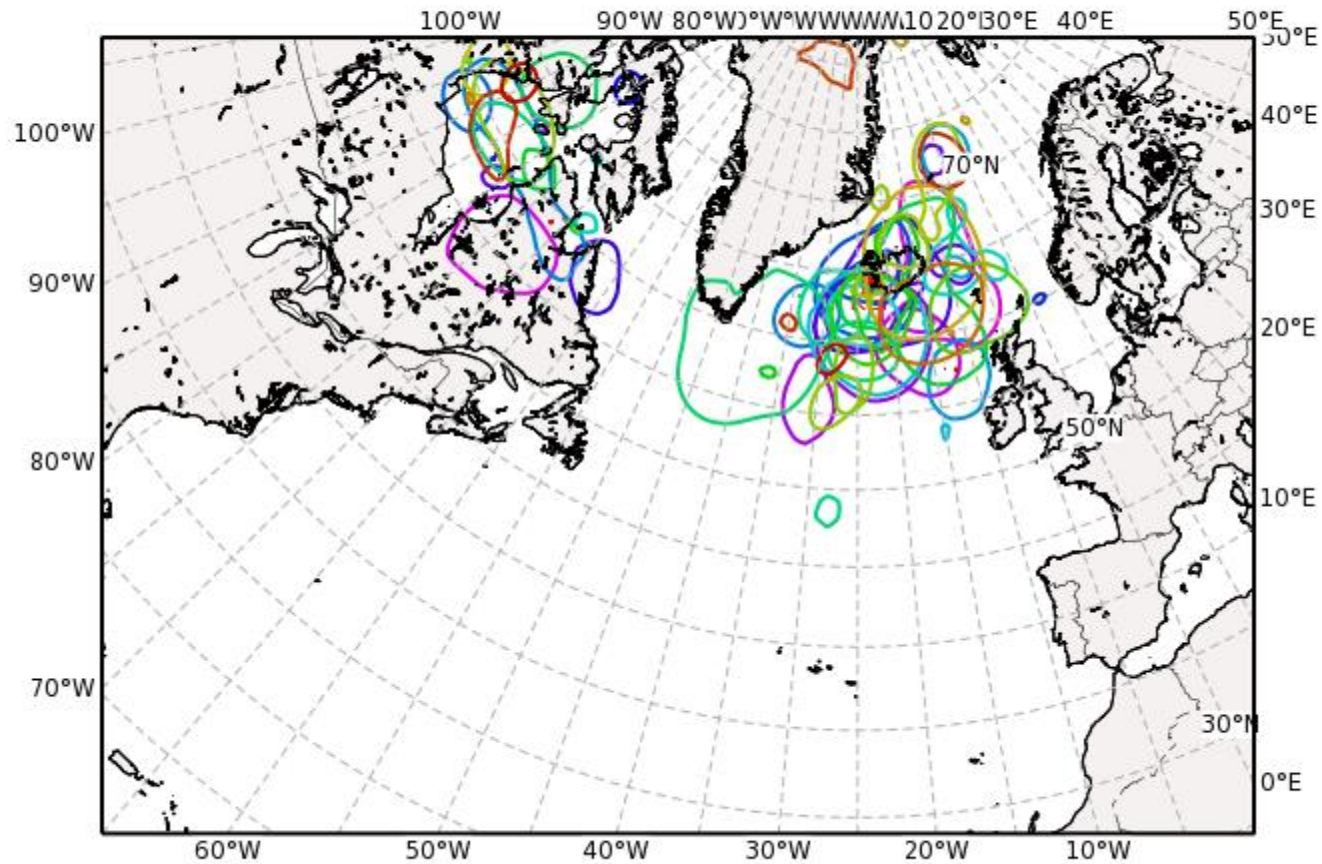
Valid: Tue, 20 Sep 2016, 12 UTC (step 168 h from Tue, 13 Sep 2016, 12 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : cyclone activity (based EC Ens 13/12Z)

ECMWF ENS MSLP (990hPa-isoline)

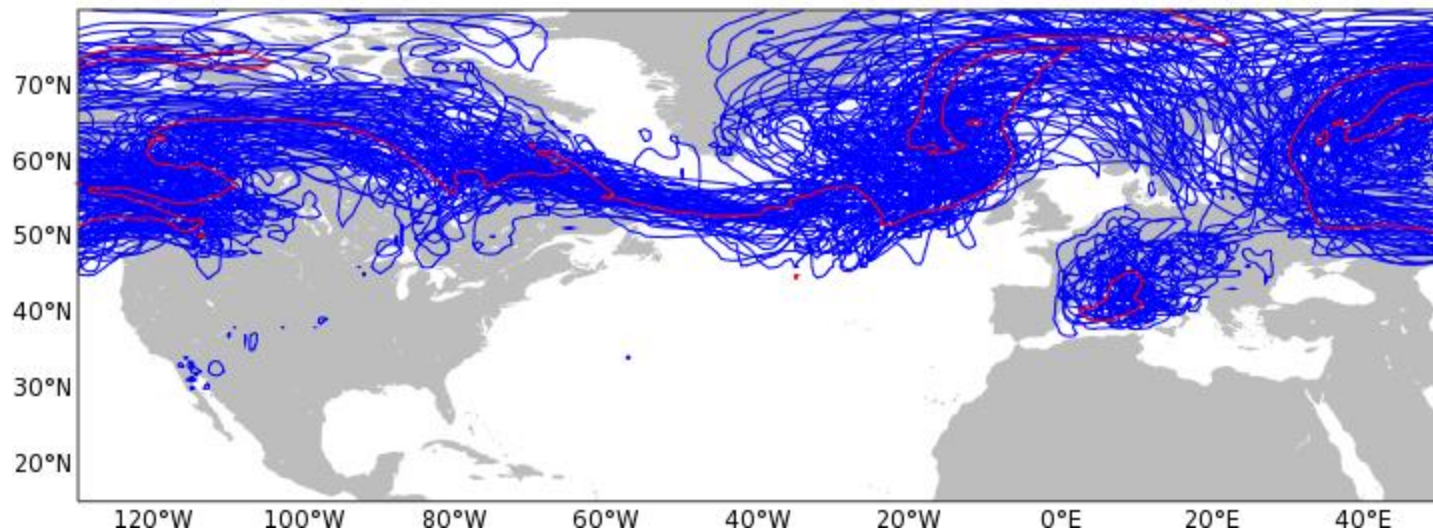
Valid: Wed, 21 Sep 2016, 00 UTC (step 180 h from Tue, 13 Sep 2016, 12 UTC)



Outlook Sat 17/00Z to Wed 21/00Z : 2PVU@330K(based EC Ens 13/12Z)

Sun 18/12Z

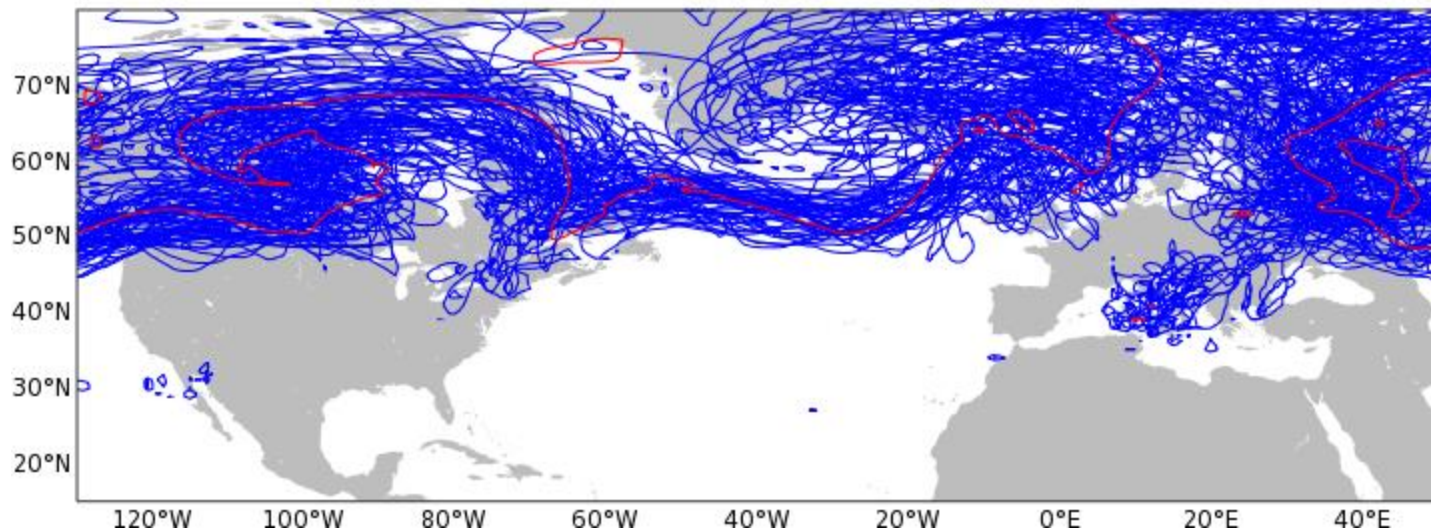
ECMWF ENSEMBLE FC
BT: 20160913 12UTC, VT: 20160918 12UTC
blue: perturbed, red: control



Outlook Sat 17/00Z to Wed 21/00Z : 2PVU@330K(based EC Ens 13/12Z)

Mon 19/12Z

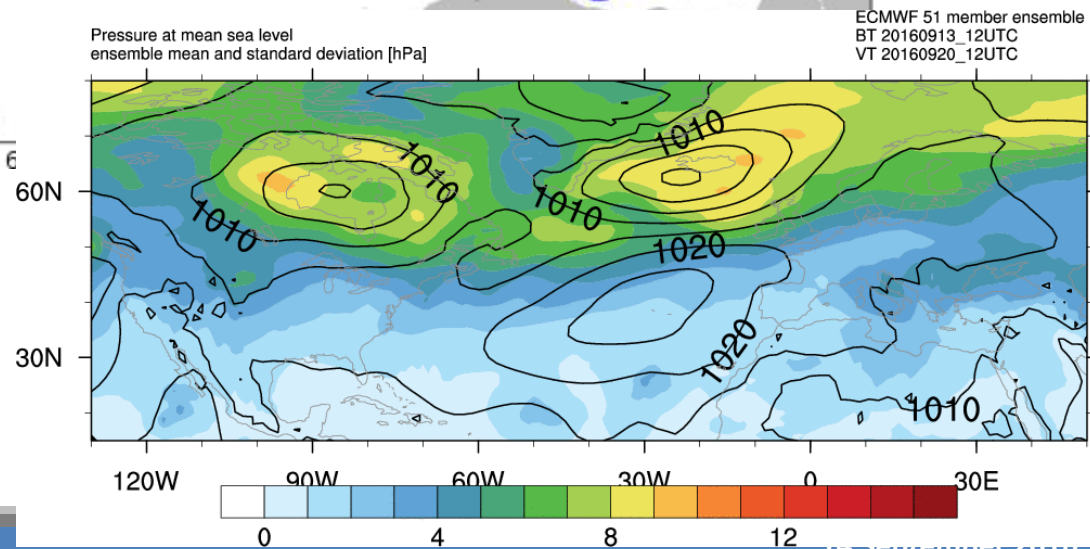
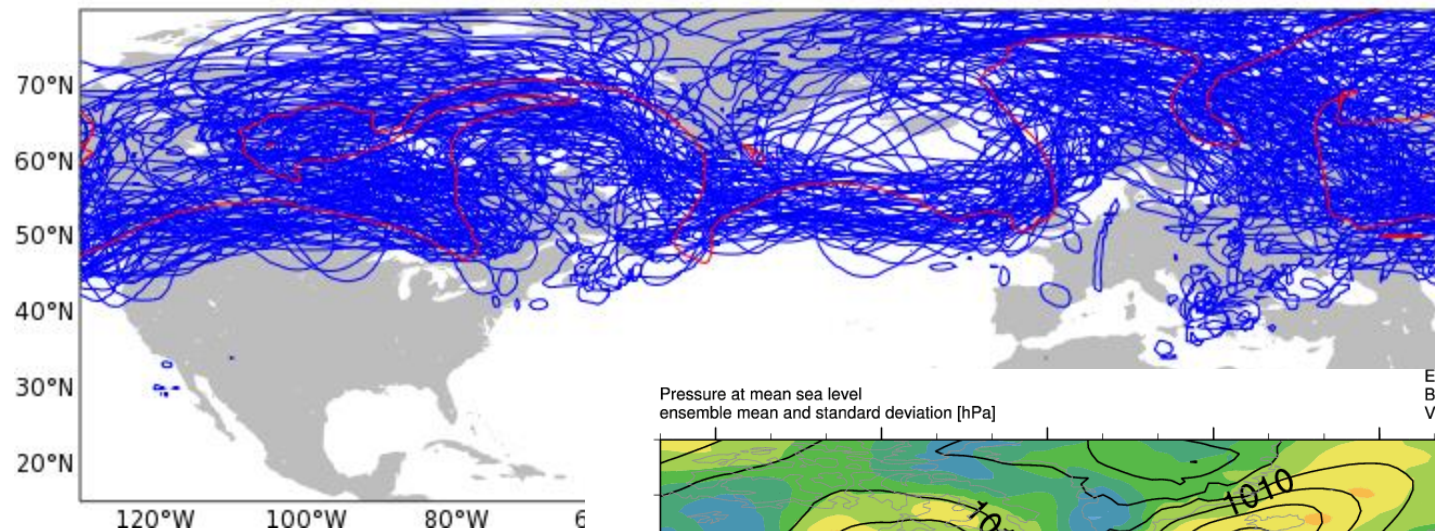
ECMWF ENSEMBLE FC
BT: 20160913 12UTC, VT: 20160919 12UTC
blue: perturbed, red: control



Outlook Sat 17/00Z to Wed 21/00Z : 2PVU@330K(based EC Ens 13/12Z)

Tue 20/12Z

ECMWF ENSEMBLE FC
BT: 20160913 12UTC, VT: 20160920 12UTC
blue: perturbed, red: control



Outlook Sat 17/00Z to Wed 21/00Z : 2PVU@330K(based EC Ens 13/12Z)

Wed 21/12Z

ECMWF ENSEMBLE FC
BT: 20160913 12UTC, VT: 20160921 12UTC
blue: perturbed, red: control

