

Operations Plan of the Day

Tuesday, 14 August 2007, 1230 UTC

General Remarks:

Our friends from UK will be back from Wednesday until Friday with their BAe 146 aircraft. Supporting ground based measurements are requested.

Synoptic Situation

A large-scale upper low is located between the north British Isles and Iceland. An intense short-wave trough at its southern periphery maintains a vigorous surface low at its eastern flank. This low will travel across the British Isles today and into the Norwegian Sea on Wednesday, thereby supporting strong warm advection over western Europe. The cold front associated with this low pressure system is expected to make only slow eastward progress and cross the COPS area in the night of Wednesday to Thursday. In its wake, slightly unstable air should flow into the COPS area on Friday.

On **Tuesday**, cirrus and altocumulus clouds should persist, and gradually increase, during the day in response to warm advection. A chance of isolated showers and thunderstorms exists especially in the southeast of the COPS domain.

The forecast for **Wednesday** calls for more intense convection. Models seem to agree now that some CAPE will develop ahead of the cold front. The stratiform precipitation related to warm advection is now placed to the north of the COPS area. The cold-frontal passage is expected late Wednesday night or early on Thursday, and the main issue is the coverage and intensity of storms near and just ahead of the front. At the moment, it appears that storms will form around 18 UTC or slightly afterwards. The first initiation is most likely in the western and north-western parts of the COPS area. Strong vertical wind shear will be in place and should have fair chances of containing rotating updrafts. An attendant severe threat including some large hail and strong winds is forecast. Even a tornado cannot be fully excluded.

On **Thursday**, after an initial cessation of the rain, it will likely set in again during the day, possibly with embedded elevated convection. The rain should gradually weaken late Thursday or early Friday morning.

Though some mid/upper level cloudiness will likely persist over the area on **Friday**, some insolation will likely occur, initiating scattered and comparatively shallow rain showers (equilibrium levels probably being around, or just below 500 hPa). This activity should diminish after sundown.

On **Saturday** convective clouds should be present, but will in most places not be deep enough to produce showers.

Operations summary:

- # Day X (Tuesday): no IOP
- # Day X+1 (Wednesday): IOP 16 (starting not earlier than 10 UTC)
- # Day X+2 (Thursday) IOP possible (prolongation of IOP 16 until 10 UTC)
- # Day X+3 (Friday) IOP possible
- # Day X+4 (Saturday) Down Day
- # Day X+5 (Sunday) Down Day

Mission Plans:

Day X, Tuesday, August 14: no IOP

Day X+1, Wednesday, August 15: IOP 16

A frontal system with prefrontal convection reaches the COPS area late on Wednesday. The timing and amount of prefrontal precipitation is not clear up to now. Therefore the **postponement** of the IOP to Thursday or the **cancellation** of the IOP is still **possible**.

Details of OC decisions will be communicated early on Wednesday morning.

Aircraft:

- # FAAM BAe146: 1130 UTC take off; areas A and B activated from 1200 to 1500 UTC.

Specifications of vertical soundings:

- # EUCOS-MeteoSwiss: 05, 17 UTC (Payerne; launching time)
- # EUCOS-DWD: 05, 17 UTC (Meiningen, M, S; launching time)
- # Achern (R): 11, 17, 23 UTC (RS 80G), 14, 20, UTC (RS 80H)
- # FZK: 14, 18:30, 23 UTC
- # Deckenfronn (S): 2 soundings: morning (05, 08, 11 UTC) and afternoon (14*, 17, 20* UTC)

*Operations Center recommendation

Lidar systems:

- # 10 - 24 UTC, Scan scenario ScaS2, **or until rain starts**.

Radar Systems:

- # Poldirad: starting at 11 UTC, continuing throughout the whole night until next morning **(if staff permitting)**

Day X+2, Thursday, August 16: IOP possible

If IOP continues on Thursday:

Aircraft:

FAAM BAe146: areas A and B activated from 1200 to 1500 UTC

Specifications of vertical soundings:

EUCOS-MeteoSwiss: 05, 17 UTC (Payerne; launching time)

EUCOS-DWD: 05, 17 UTC (Meiningen, M, S; launching time)

Hornisgrinde (H): 05, 11 UTC (RS 80G), 08 UTC (RS 80H)

FZK: 05, 08 UTC

Deckenpfronn (S): 2 soundings: morning (05*, 08, 11* UTC) and afternoon (14, 17, 20 UTC)

*Operations Center recommendation

Additional radiosonde launchings at Achern and Hornisgrinde are requested during BAe 146 flight between 1200 and 1500 UTC. Decision about launching will be made on Wednesday.

Lidar systems:

05 - 10 UTC, Scan scenario ScaS2 (if staff and weather permitting)

Radar Systems:

Poldirad: continuing throughout the whole night until 12 UTC (if staff permitting)

Day X+3, Friday, August 17: IOP possible

Day X+4, Saturday, August 18: Down Day

Day X+5, Sunday, August 19: Down Day

Your COPS Operations Center Team

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