

Operations Plan of the Day

Tuesday, 21 August 2007, 0900 UTC

General Remarks:

Synoptic Situation

A cut-off low covers most of central and western Europe. At the surface several low pressure systems are circling anti-clockwise around the centre of the upper low. Whereas cool air is present to the west, moist and warm airmasses from the Mediterranean Sea are involved in the circulation from the southeast. While strengthening a surface low travels from northeastern Germany to the west and the southwest and will be located over eastern France on Wednesday becoming quasi-stationary thereafter. On Friday the northeastern half of the cut-off low is expected to join the zonal westerly flow which is directed from the North Atlantic Ocean into Russia. Remnants of the southwestern portion of the cut-off low will affect the Iberian Peninsula for quite a long time. As a result the geopotential at all levels increases at least over the southern parts of Central Europe generating much more stable conditions on the weekend and during the first half of the next week.

A surface low pressure system is expected to travel from northeastern Germany towards the southwest on **Tuesday**. Its huge rain area with some embedded thunderstorms will not affect the COPS area, however forces slightly more unstable air into southern Germany. Some CAPE may develop in the course of the day but will be greatest over Bavaria. Stratiform clouds are present at first but rain will cease. Even the sun gets some portions of the sky. During the afternoon hours/towards evening cumulus clouds are likely to form, too, and with the help of an upper-level short wave trough some showers of partly embedded character are expected to develop. Though most likely over southeastern Baden-Württemberg and western Bavaria a thunderstorm or two cannot be ruled out over the COPS region.

Ahead of the aforementioned low pressure system cold air advection from the southwest will dominate the weather pattern in the COPS area on **Wednesday**. As the COPS area is situated between an area of pretty strong stratiform precipitation over eastern France and an area with some weak convective activity over Bavaria not much is to be expected until the afternoon. Mainly stratiform clouds at the mid level will be present. Chances of sun are best in the late afternoon/evening, showers or even a thunderstorm might develop preferably in the southeastern portion of the COPS area. However, models show some differences concerning the track of the low pressure system. Both scenarios are possible: either stratiform rain could prevail or convective activity could be more pronounced.

On **Thursday** the COPS area is located at the edge of the back-bent occlusion of the persisting low pressure system over eastern France. Cloudy but mainly dry conditions are expected at first, followed by sunnier afternoon hours. Given some CAPE and insolation few showers are expected to develop. Though not very likely, even a thunderstorm might occur.

Both the surface and the upper low weaken on **Friday** leading to a quite friendly day with lots of sun. Mostly shallow cumulus clouds will develop with surface heating but a last shower cannot be excluded.

Under high pressure influence **Saturday** will be a sunny and dry day.

Operations summary:

- # Day X (Tuesday) IOP 17a
- # Day X+1 (Wednesday) IOP 17b
- # Day X+2 (Thursday) IOP possible
- # Day X+3 (Friday) IOP possible
- # Day X+4 (Saturday) down day

Mission Plans:

Day X, Tuesday, August 21: IOP 17a

Specifications of vertical soundings:

- # EUCOS-MeteoSwiss: 05, 17 UTC (Payerne; launching time)
- # EUCOS-DWD: 05, 17 UTC (Meiningen, M, S; launching time)
- # Achern (R): 8, 11, 14, 17 UTC (RS92)
- # Hornisgrinde (H): 8, 11, 14, 17 UTC (RS92)
- # Deckenpfronn (S): 2 soundings: morning (one time of 05, 08* or 11 UTC) and afternoon (one time of 14, 17*, 20 UTC)
*Operations Center recommendation
- # IMK Dropup-sondes 2 Dropup-sondes launches with FLYP'S at Seibelseckle or Hornisgrinde between 10-18 UTC

Lidar systems:

- # 07 - 18 UTC, Scan scenario ScaS1, weather permitting.

Radar Systems:

- # Poldirad: standard daytime measurements

Day X+1, Wednesday, August 22: IOP 17b

Aircraft:

- BAe 146: Flight possible and under discussion.
Possible flight period is 12:00-15:15 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): 8, 11, 14, 17, 20 UTC (RS92)
- # Hornisgrinde (H): 8, 11, 14, 17, 20 UTC (RS92)
- # Deckenpfronn (S): 2 soundings: morning (one time of 05, 08* or 11 UTC) and afternoon (one time of 14, 17*, 20 UTC)

*Operations Center recommendation

Lidar systems:

- # 07 - 21 UTC, Scan scenario ScaS1, weather permitting.

Radar Systems:

- # Poldirad: standard daytime measurements

Day X+2, Thursday, August 23: IOP possible

If confirmed, with a similar operations plan as on Wednesday.

Day X+3, Friday, August 24: IOP possible

Day X+4, Saturday, August 25: Down day

Your COPS Operations Center Team

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