

Operations Plan of the Day

Monday, 30 July 2007, 0815 UTC

General Remarks:

In the wake of a frontal wave, the cold front of which has crossed COPS area yesterday in the late afternoon, a strong northwesterly flow has been established. Embedded mid/upper-level short wave troughs give some forcing, though being of less intensity in southwestern Germany. Morning Sc over the Black Forest evolves into Cu, accompanied by Cu elsewhere in the course of the day. As an inversion layer is present around 700 hPa, most Cu will not grow deeper. However, there is a chance for few Cu con, and – although unlikely – even one shower or two cannot be ruled out.

A mid/upper-level short wave trough may affect the COPS area generating partly low-, partly mid-level stratiform cloudiness in the night to **Tuesday**. Also Ci or Cs is likely to develop. It's still hard to give a precise forecast concerning the total cloud cover. The uncertainty continues on Tuesday as another mid/upper-level short wave trough provides some extra humidity and forcing. Skies seem to be cloudier than on Monday, however, the sun gets a good portion of the day. Sunniest conditions are expected towards the southwest. As a slowly eastward moving high pressure ridge builds up over France, mid-level subsidence in the southwestern parts of Germany becomes evident in the course of the day. If the subsidence leads to a pronounced inversion, cumulus clouds may partly spread into Stratocumulus, dissolving in the evening/night to Wednesday.

On **Wednesday**, the ridge is expected over Germany. Strong mid-level subsidence creates fair, dry and warmer conditions in the COPS area. Only few and shallow Cu are likely to develop mainly over mountains. Ahead of a mid/upper-level long wave trough at the western edge of Europe, a surface low pressure area is expected to form over northern Spain/southern France

On **Thursday**, as the surface low travels to northern Germany, the southwesterly flow increases, advecting warmer and moister air into the COPS area. The remnants of a Mesoscale Convective System that might have developed over central France in the night before, could affect the COPS area in the morning hours already, leading to partly stratiform, partly convective cloudiness and some rain throughout the day. Thunderstorms are most likely in the vicinity of the passing cold front that is expected to cross COPS area in the evening hours.

On **Friday**, in the wake of the eastward travelling surface low COPS area gets under the influence of a trough again. The flow of cool air will be renewed leading to a day with large amounts of stratiform clouds and rain of embedded convective nature.

Operations summary:

Day X (Monday): IOP 12

Day X+1 (Tuesday): no IOP, Debriefing discussing IOPs 9, 10, and 11 will take place on Tuesday, 31 July, 12:00 LT in meeting room Venezia, afterwards a picnic is planned, please bring your own food and drinks

Day X+2 (Wednesday): IOP possible

Day X+3 (Thursday): IOP possible

Day X+4 (Friday): IOP possible

Mission Plans:

Day X, Monday, July 30: IOP 12

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Specifications of vertical soundings:

# IMK-FZK:	08, 11, 14, 17, 20 UTC
# IMK-Burnhaupt:	no soundings
# EUCOS-MeteoSwiss:	05, 17 UTC (Payerne; launching time)
# EUCOS-DWD:	05, 17 UTC (Meiningen, M, S; launching time)
# Hornisgrinde (H):	no soundings
# Achern (R):	08, 11, 14, 17 UTC (RS 92)
# Meistratzheim (V):	2315 (day X-1), 0515, 0815, 1115, 1415, 1715 UTC
# Deckenpfronn (S):	no soundings
# IMK Dropupsondes:	no operations

Lidar systems:

Operation period 0800 – 1800 UTC; Scan scenario ScaS1.

Doppler-on-Wheels (DOW):

Coordinated operations of two DOWs in the Northern Black Forest (DNW5 (Neuried) and DNE8)

Sodar at Supersite R:

No operation allowed.

Aircraft:

# SAFIRE Falcon	0900 – 1300 UTC MAP pattern
# DLR Falcon	1000 – 1500 UTC FLUX pattern
# Do 128	1015 – 1330 UTC FLUX pattern, Chaff release (1310 -1320 UTC)
	1400 – 1600 UTC possible mission including drop sondes

Day X+1, Tuesday, July 31: no IOP

A mid/upper-level short wave trough may affect the COPS area generating partly low-, partly mid-level stratiform cloudiness in the night to **Tuesday**. Also Ci or Cs is likely to develop. It's still hard to give a precise forecast concerning the total cloud cover. The uncertainty continues on Tuesday as another mid/upper-level short wave trough provides some extra humidity and forcing. Skies seem to be cloudier than on Monday, however, the sun gets a good portion of the day. Sunniest conditions are expected towards the southwest. As a slowly eastward moving high pressure ridge builds up over France, mid-level subsidence in the southwestern parts of Germany becomes evident in the course of the day. If the subsidence leads to a pronounced inversion, cumulus clouds may partly spread into Stratocumulus, dissolving in the evening/night to Wednesday.

Aircraft:

SAFIRE Falcon 1900 – 2200 UTC reduced MAP pattern for Lidar
intercomparison possible

Extra radiosondes shall be launched during the time of the aircraft operation from supersites H, R, and V. Any supporting measurements from ground-based systems will be coordinated by Paolo Di Girolamo

The 6th Science Debriefing will take place at the conference room Venezia at 12:00 LT (1000 UTC). Please provide brief presentations on the highlights of IOP 9, 10, and 11.

Afterwards a picnic in the backyard of the conference room is planned; please bring your own food and drinks.

Day X+2, Wednesday, August 01: IOP possible (likely)

On **Wednesday**, the ridge is expected over Germany. Strong mid-level subsidence creates fair, dry and warmer conditions in the COPS area. Only few and shallow Cu are likely to develop mainly over mountains. Ahead of a mid/upper-level long wave trough at the western edge of Europe, a surface low pressure area is expected to form over northern Spain/southern France

Aircraft:

SAFIRE Falcon 0800 – 1200 UTC MAP pattern
1300 – 1700 UTC MAP pattern
DLR Falcon one or two flights

Day X+3, Thursday, August 02: IOP possible

On **Thursday**, as the surface low travels to northern Germany, the southwesterly flow increases, advecting warmer and moister air into the COPS area. The remnants of a Mesoscale Convective System that might have developed over central France in the night before, could affect the COPS area in the morning hours already, leading to partly stratiform, partly convective cloudiness and some rain throughout the day. Thunderstorms are most likely in the vicinity of the passing cold front, that is expected to cross COPS area in the evening hours.

Day X+4, Friday, August 03: IOP possible

On **Friday**, in the wake of the eastward travelling surface low COPS area gets under the influence of a trough again. The flow of cool air will be renewed leading to a day with large amounts of stratiform clouds and rain of embedded convective nature.

Your COPS Operations Center Team

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