

# COPS Weather Summary

28 August 2007

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## Synoptic Overview

The COPS region is situated on the southern periphery of a broad longwave trough over Scandinavia. A cut-off low located to the west of the Iberian Peninsula is moving eastward while evolving into a NE-SW oriented trough. Increasing northward warm-air advection is expected ahead of that system. An inactive zonally-oriented front has stalled near the southern COPS domain border. The front will likely be the focus for stratiform and embedded convective precipitation starting late on Tuesday and continuing into Wednesday and in the southeast into Thursday.

## Analysis and Forecast of Synoptic Controls in the COPS Region

### Tuesday, 28 August

In southern France and the Alps, the increased warm-air advection will likely cause the initiation of scattered storms within the warm air-mass. Stratiform and elevated convective precipitation is expected to commence in the range of the frontal zone later in the day and may also affect southern parts of the COPS domain.

### Wednesday, 29 August

The frontal zone is still located over the COPS region. Widespread stratiform and elevated convective precipitation is expected over the southern and perhaps central parts of the COPS area. The rain will probably in part occur in concert with mesoscale convective systems that pass to the south of the COPS area. Only the stratiform rain of the MCS's should affect the COPS region.

### Thursday, 30 August

On Thursday the front should finally start to move off to the southeast, but some stratiform rain will likely affect the COPS area.

### Friday, 31 August

As a surface ridge builds up and cloudiness moves off to the southeast, quite friendly weather is expected initially before a weak frontal system should approach us from the northwest.

### Today, Tuesday 28 August

Time/location of first convective cloud development	Only a few shallow cumulus clouds below mid- and high-level clouds.
Time/location of convective storm initiation	Chance of a weak shower over the southern Black Forest in the evening.
Mode/coverage/evolution	Convection will be elevated, no surface-based developments.
Convective cloud base	Around 1500 m; higher in the north, lower in the south.
Storm motion	At about 5 m/s from the southwest.
Maximum temperature	Up to 24 °C in the southern Rhine Valley.
Precipitation	Up to 5 mm in the southern Black Forest with a single shower in the evening, otherwise dry.
Severe weather threat	Low.

### Tomorrow, Wednesday 29 August

Time/location of first convective cloud development	Mainly stratiform precipitation/convective rain of only embedded nature is to be expected preferably over the southern parts of COPS area, becoming weaker in the afternoon and evening.
Time/location of convective storm initiation	
Mode/coverage/evolution	
Cloud base	Around 1000 m, but much lower in rain.
Storm motion	At about 5 m/s from the southwest.
Maximum temperature	19-21 °C with sufficient insolation towards the north, below 15 °C with longer rainy episodes in the south.
Precipitation	Up to 50 mm with lasting rain in the southern Black Forest.
Severe weather threat	Low, except for possible local flooding problems in the southern Black Forest.

### Thursday 30 August

Time/location of first convective cloud development	Shallow convective clouds over great parts of the COPS region in the afternoon.
Time/location of convective storm initiation	
Mode/coverage/evolution	
Cloud base	Around 1600 m in the north, but some low-level clouds in the morning mainly towards the south.
Storm motion	-
Maximum temperature	21-23 °C.
Precipitation	Dry except for a few last rain drops in the southern COPS area in the morning.
Severe weather threat	-

### Friday 31 August

Time/location of convective storm initiation, Mode/coverage, Evolution	-
Maximum temperature	17-22 °C, depending on insolation.
Precipitation	Up to 5 mm with some stratiform rain, but it might also stay dry in many places.
Severe weather threat	-

### Suggestions for IOP's and down days

Today there is a chance for a shower in the southern Black Forest in the late evening, otherwise it will stay dry. This set-up appears rather unfavourable for an IOP. Wednesday and Thursday, given the large-scale nature of the rain, the days appear of low interest for COPS. Concerning Friday, an IOP is not recommend either as convective showers appear unlikely.