

# COPS Weather Summary

24 August 2007

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Valid: Friday 24 August 08:00 UTC to Wednesday 29 August 00:00 UTC

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## Synoptic Overview

A large, complex upper-level low filled with cold air is located over France, the Benelux and western Germany. This system is expected to evolve into an elongated trough stretching from the Baltic Sea to Spain, with its axis just to the north-west of the COPS domain, on Friday. This should leave an unstable stratification that should allow for diurnally-driven convective storms to develop on Friday and possibly on Saturday. Later on Saturday, weak subsidence is forecast to warm the mid-troposphere, so that the chance of convection should decrease, so that no deep convection is expected on Sunday. Monday morning a cold front is expected to pass the COPS area from the north, with cool, dry air in its wake.

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

### Friday, 24 August

Friday should be a friendly day with lots of sunshine. In response to solar heating, cumulus clouds will develop during the morning. Over the mountains a few isolated showers and possibly thunderstorms are expected to develop in the early afternoon.

### Saturday, 25 August

Another sunny day is expected with scattered small and medium-sized convective clouds. Being in the vicinity of the trough axis, it appears possible that an isolated shower manages to form, most likely over the mountains.

### Sunday, 26 August

Sunday will be a mostly dry and sunny day.

### Monday, 27 August

A cold front is expected to pass during the day, but only little cloudiness and no rain is forecast.

### Tuesday, 28 August

The frontal zone will likely return northward. As a result of the associated warm air advection, high and mid-level cloudiness is expected to increase during the day. Rain may affect the southern COPS area later in the day.

## Extended Outlook

The frontal zone that returns northward late on Tuesday may produce prolonged stratiform and embedded convective rain over the COPS region on Wednesday. Alternative scenario's include a slightly more rapid northward movement that oupts the COPS area within warm, moist air in which severe thunderstorms may develop. Another scenario is a weaker or no return of the warm air, which would mean that the COPS region would not receive any rain. In brief, the uncertainties are quite large.

**Today, Friday 24 August**

Time/location of first convective cloud development	Cu hum to Cu con from the late morning on.
Time/location of convective storm initiation	Isolated showers/local thunderstorm from early afternoon over the mountains.
Mode/coverage/evolution	Few and isolated cells, getting weaker and maybe clustering towards the evening.
Convective cloud base	Around 1600 m.
Storm motion	From the southwest at about 5 m/s.
Maximum temperature	Up to 29 °C in the Rhine Valley.
Precipitation	Up to 10 mm with local showers.
Severe weather threat	Low.

**Tomorrow, Saturday 25 August**

Time/location of first convective cloud development	Convective cloud development from the late morning onwards; very few showers/thunderstorms tied to the mountains in the afternoon.
Time/location of convective storm initiation	
Mode/coverage/evolution	
Cloud base	Around 1600 m.
Storm motion	At about 5 m/s from the southwest.
Maximum temperature	Up to 30 °C in the Rhine Valley.
Precipitation	Up to 10 mm with local showers.
Severe weather threat	Low.

**Sunday 26 August**

Time/location of first convective cloud development	Mainly only shallow and non-precipitating cumulus clouds are to be expected.
Time/location of convective storm initiation	
Mode/coverage/evolution	
Cloud base	Around 1500 m.
Storm motion	-
Maximum temperature	26-28 °C.
Precipitation	-
Severe weather threat	-

**Monday 27 August**

Time/location of convective storm initiation, Mode/coverage, Evolution	Only shallow cumulus clouds after some low-level stratiform clouds have dissolved.
Maximum temperature	22-24 °C.
Precipitation	-
Severe weather threat	-

**Tuesday 28 August**

Time/location of convective storm initiation, Mode/coverage, Evolution	Quite uncertain; showers/thunderstorms, if they form, most likely over the mountains in the afternoon.
Maximum temperature	22-25 °C.
Precipitation	Up to 10 mm with local showers/thunderstorms and stratiform rain possible.
Severe weather threat	Low from the current point of view.

**Suggestions for IOP's and down days**

Today and tomorrow local showers are to be expected mainly over the mountains, so IOP 18 is ongoing. As only shallow convection will form on Sunday and Monday, these days are not interesting for COPS. Tuesday is still quite uncertain, another IOP should not yet be excluded.