

COPS Weather Summary

7 August 2007

Issued: Tuesday 7 August 9:00 UTC

Valid: Tuesday 7 August 9:00 UTC to Sunday 12 August 00:00 UTC

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Synoptic overview

An elongated trough extending from the British Isles to the Bay of Biscay is expected to evolve into a cut-off low over north-western France. Ahead of this system a strong southerly mid- and upper-tropospheric flow is located over eastern France and the Benelux countries. The associated baroclinic zone in the lower troposphere directly affects over the COPS area. As the cut-off low moves towards northern Italy, upward vertical motion should increase over and north of the Alps in a regime of westward warm air advection. As a result, widespread rain that is partially convective, partially stratiform is expected to develop over the Alps early on Wednesday and over southern Germany later on Wednesday into Thursday. Slow movement of the cut-off low suggests that the precipitation will affect the COPS area for a longer time, possibly into the weekend. As a result, flooding problems are a possibility.

Analysis and forecast of synoptic controls in the COPS region

Today, Tuesday 7 August

A mesoscale convective system moves over the COPS area towards the northeast during the morning hours. Behind the MCS, a dry period will start that should last overnight and into Wednesday afternoon.

Wednesday 8 August and Thursday 9 August

During the afternoon or early evening, rather intense precipitation is expected to set in from the south and remain over the COPS region at least until Thursday late morning, but likely longer albeit with slightly reduced intensity. Rain amounts of 40-80 mm in the Valleys and possibly over 100 mm locally in the mountains are expected between Wednesday 12 UTC and Thursday 12 UTC.

Friday 10 August

The stratiform and elevated convective rains in the range of the mid/upper-low will likely still be near the COPS area. Exact details about the focal point of the rain activity differ among model runs. It may be as far northwest as Belgium or as far southeast as Bavaria. Most likely, the COPS area will still be affected by ample rainfall, albeit with slightly less intensity as on the days before.

Saturday 11 August

The rains in the range of the mid/upper-low may still be near the COPS area, but the likelihood increases that most activity will have moved off to the north and east.

Extended outlook

During Sunday and Monday a transition to somewhat more stable weather is likely as a surface ridge of high pressure from a high over the north Atlantic expands in the direction of the COPS area.

Today, Tuesday 7 August

Time/location of first convective cloud development	Widespread stratiform and embedded convective clouds.
Time/location of convective storm initiation	A few embedded thunderstorms. Surface-based convective development possible east of the Black Forest.
Mode/coverage/evolution	Firstly, relatively isolated single- and multicell storms, increasing in coverage during the night. More showers advected into the COPS area from the west.
Convective cloud base	500 - 1000 m
Storm motion	To the northeast at 10 m/s
Maximum temperature	Up to 25 °C in the east of the COPS area
Precipitation	5-20 mm, locally up to 30 mm under near-stationary showers.
Severe weather threat	Low.

Tomorrow, Wednesday 8 August

Time/location of first convective cloud development	Widespread stratiform and embedded convective clouds.
Time/location of convective storm initiation, Mode/coverage, Evolution	A few embedded thunderstorms possible.
Convective cloud base	800 - 1200 m
Storm motion	From the southwest at around 10 m/s.
Maximum temperature	Around 20 °C.
Precipitation	Until midnight 25 - 50 mm, possibly higher amounts in the mountains.
Severe weather threat	Low.

Thursday 9 August

Time/location of first convective cloud development	Widespread stratiform and embedded convective clouds.
Time/location of convective storm initiation, Mode/coverage, Evolution	A few embedded thunderstorms. Surface-based convective development possible in the northeast of the COPS region.
Convective cloud base	800 - 1200 m
Storm motion	From the southwest at around 10 m/s.
Maximum temperature	Around 18 °C.
Precipitation	30 - 60 mm, possibly higher amounts in the mountains.
Severe weather threat	Some flood threat present.

Friday 10 August

Time/location of first convective cloud development	Mostly stratiform clouds with possibly embedded convection if the rain-zone is still over the COPS area. Surface-based convection, with weak showers possible in the post-frontal air-mass, most likely in the west of the COPS region.
Time/location of convective storm initiation, Mode/coverage, Evolution	

Maximum temperature	Up to 20 °C in the Rhine Valley.
Precipitation	10 - 40 mm, depending on the location and intensity of the rain zone.
Severe weather threat	Low

Saturday 11 August

Time/location of first convective cloud development	Mostly stratiform clouds with possibly embedded convection if the rain-zone is still over the COPS area. Surface-based convection, with weak showers possible in the post-frontal air-mass. Quite uncertain.
Time/location of convective storm initiation, Mode/coverage, Evolution	
Maximum temperature	Up to 22 °C in the Rhine Valley.
Precipitation	5 – 25 mm, depending on the location and intensity of the rain zone.
Severe weather threat	Low

Suggestions for IOP's and down days

Today and tomorrow (Wednesday) the likelihood of an intense -partly convective- rain event suggests that IOPs are being carried out.