

COPS Weather Summary

20 August 2007

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Valid: Monday 20 August 10:00 UTC to Saturday 25 August 00:00 UTC

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Synoptic Overview

Monday at 06 UTC... the major feature on the forecast maps is a trough that has its axis over the British Isles and western France. This trough is filled with relatively unstable air and should move eastward very slowly during the next days while evolving into a slack cut-off low over southeastern France. At the surface, a low-pressure system should develop in the Gulf of Genua on Monday and later the low should "jump over" the Alps on Tuesday when cyclogenesis is expected over southwestern Germany.

Analysis and Forecast of Synoptic Controls in the COPS Region

Today, Monday 20 August

Scattered stratocumulus and cumulus clouds are expected over the area. A few showers are still possible in the morning, but it should be dry during the remainder of the day.

Tuesday, 21 August

Ahead of a shortwave rotating about the cut-off low over eastern France, pressure falls are expected over the COPS area during Tuesday. As a result warm-air advection from the east is expected north of the Alps, which should act to steepen low/level lapse rates sufficiently for storm development to occur during the afternoon over the COPS area. The warm advection regime will likely favour rather rapid clustering of the storms into a small convective system that will likely persist until late evening or into the night.

Wednesday, 22 August

Weak cold-air advection is expected over the area which should lead weak subsidence and dissolution of any remnant stratiform clouds covering the area during the early morning. Rather clear weather with medium-sized cumulus clouds is forecast. As another mid/upper-level vorticity maximum approaches, clouds should be able to deepen during the afternoon and grow into a few showers and/or thunderstorms, most likely over the mountains. The activity will likely cease after sunset.

Thursday, 23 August

Models suggest that an area of stratiform precipitation belonging to a back-bent occlusion may move into the COPS region in the afternoon, leading to rainy weather conditions.

Friday, 24 August

Another rather inactive section of the occluded front will likely linger on in the vicinity of the COPS area on Friday, so that the chance exists that there will be a few longer periods of light rain and quite a lot of cloudiness. Within large breaks in the stratiform cloud-deck a few showers can be expected to form once again.

Extended Outlook

After Friday, the atmosphere will likely stabilize further and mostly dry weather is forecast for the weekend.

Today, Monday 20 August

Time/location of first convective cloud development	Widespread cumulus clouds are already present.
Time/location of convective storm initiation	Few showers already ongoing.
Mode/coverage/evolution	Showers become less in the afternoon.
Convective cloud base	Around 1000 m, rising to about 1500 m in the afternoon.
Storm motion	From the southwest at about 10 m/s.
Maximum temperature	Up to 22 °C in the Rhine Valley.
Precipitation	Up to 5 mm with showers.
Severe weather threat	Low.

Tomorrow, Tuesday 21 August

Time/location of first convective cloud development	Convective cloud development before noon; first isolated showers and thunderstorms mainly over the Black Forest around noon, possible quickly clustering and growing together into a larger-scale precipitation area with embedded convection.
Time/location of convective storm initiation	
Mode/coverage/evolution	
Cloud base	Around 1400 m, decreasing with starting rain in the afternoon.
Storm motion	At about 10 m/s from the south.
Maximum temperature	22-25 °C, depending on insolation.
Precipitation	10-20 mm with showers/thunderstorms and subsequent rain.
Severe weather threat	Low.

Wednesday 22 August

Time/location of first convective cloud development	Many clouds and a little stratiform rain at first; development of Cu to Cb leading to widespread showers and thunderstorms with peak activity in the afternoon.
Time/location of convective storm initiation	
Mode/coverage/evolution	
Cloud base	Around 600 m at first, rising to about 1200 m.
Storm motion	At about 5-10 m/s from the southwest.
Maximum temperature	21-23 °C.
Precipitation	Up to 15 mm.
Severe weather threat	Low.

Thursday 23 August

Time/location of convective storm initiation, Mode/coverage, Evolution	Mainly stratiform rain is expected in the afternoon.
Maximum temperature	Up to 24 °C in the Rhine Valley before rain sets in.
Precipitation	Up to 10 mm.
Severe weather threat	-

Friday 24 August

Time/location of convective storm initiation, Mode/coverage, Evolution	Uncertain; remnants of Thursday's rain might be present in the morning hours; more convective developments towards the afternoon.
Maximum temperature	22-25 °C.
Precipitation	Up to 5 mm.
Severe weather threat	Low.

Suggestions for IOP's and down days

However few showers will occur, today will be a case of moderate interest for COPS goals. On Tuesday and Wednesday convective activity increases and regarding that the BAe aircraft is available again, IOP's are recommended. Thursday and Friday look less promising so further additional measurement activities are not advised.