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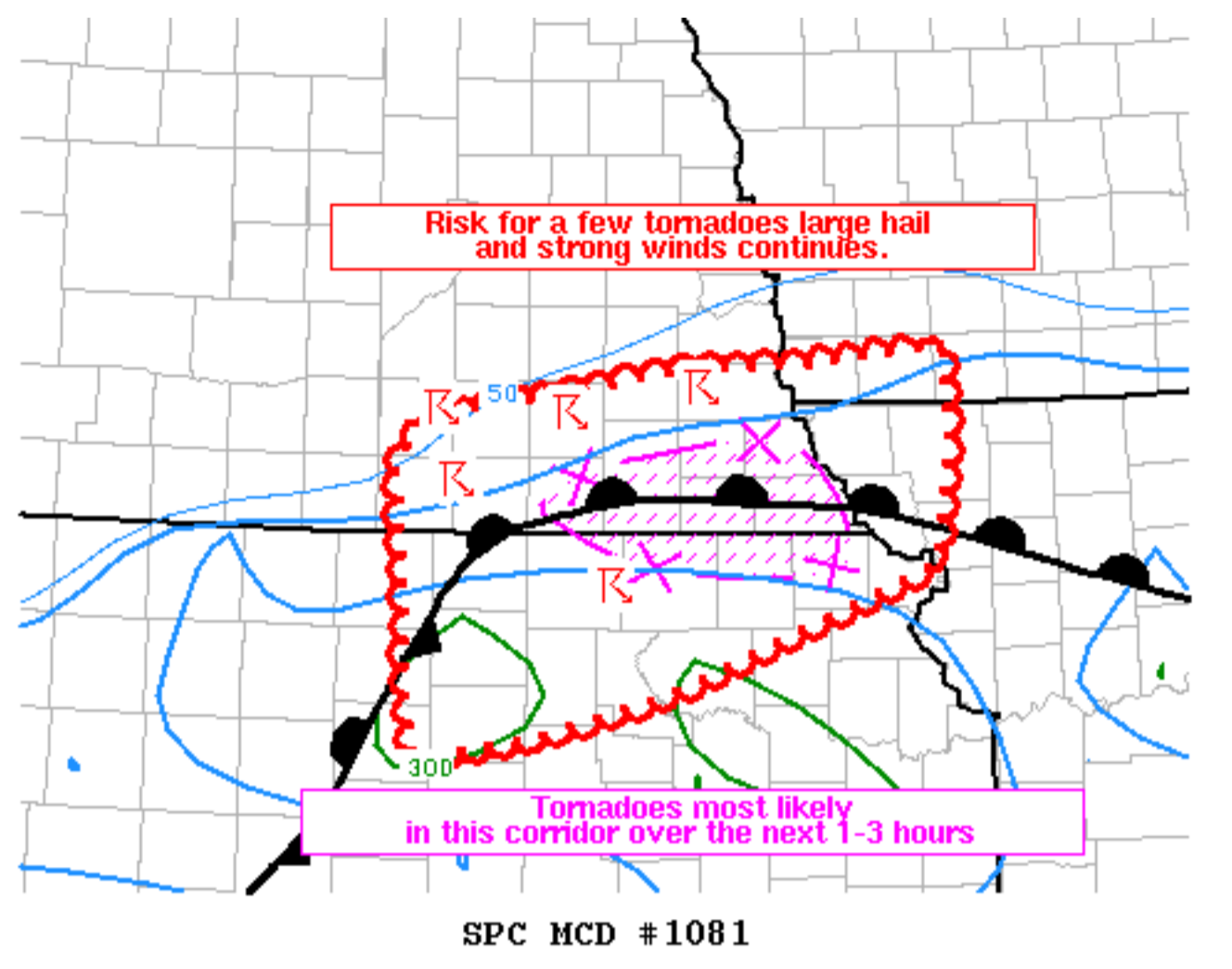
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Mesoscale Discussion 1081

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Mesoscale Discussion 1081

NWS Storm Prediction Center Norman OK

0530 PM CDT Thu Jun 24 2021

Areas affected...far northern Kansas and extreme southeastern Nebraska

Concerning...Tornado Watch [309](#)...

Valid 242230Z - 242330Z

The severe weather threat for Tornado Watch 309 continues.

SUMMARY...A few tornadoes may develop along an enhanced corridor near a warm front across far northern Kansas and southern Nebraska. A strong tornado will also be possible. Severe weather, including tornadoes remain possible over the rest of the watch area.

DISCUSSION...22z objective analysis showed a well defined baroclinic zone stretching from Jefferson County Nebraska to Brown County Kansas. Along this boundary, strong instability has developed with surface dewpoints in the 70s F. Surface pressure falls have backed low-level winds, supporting local strengthening of an already impressive low-level shear profile. With 200-300 m²/s² 0-1 km SRH observed via the 22z Topeka sounding, storms interacting with this zone of enhanced vertical vorticity will likely be capable of producing a few tornadoes as they track east over the next 1 to 3 hours. A strong tornado may also be possible given the favorable parameter space with an observed effective-layer STP of 4.

To the south and west, increasing convergence along the stationary front may also support rapid severe storm development in the next couple of hours. Low-level shear remains strong in this region as well suggesting all severe hazards are possible. Recent mesoanalysis shows moderate surface pressure rises to the west suggesting a southeastward surge of the front may develop in the next couple of hours. Should this occur, increased convergence resulting in upscale growth of any initial discrete convection will likely occur. A greater damaging wind threat may evolve over this region later this evening.

..Lyons.. 06/24/2021

...Please see www.spc.noaa.gov for graphic product...

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