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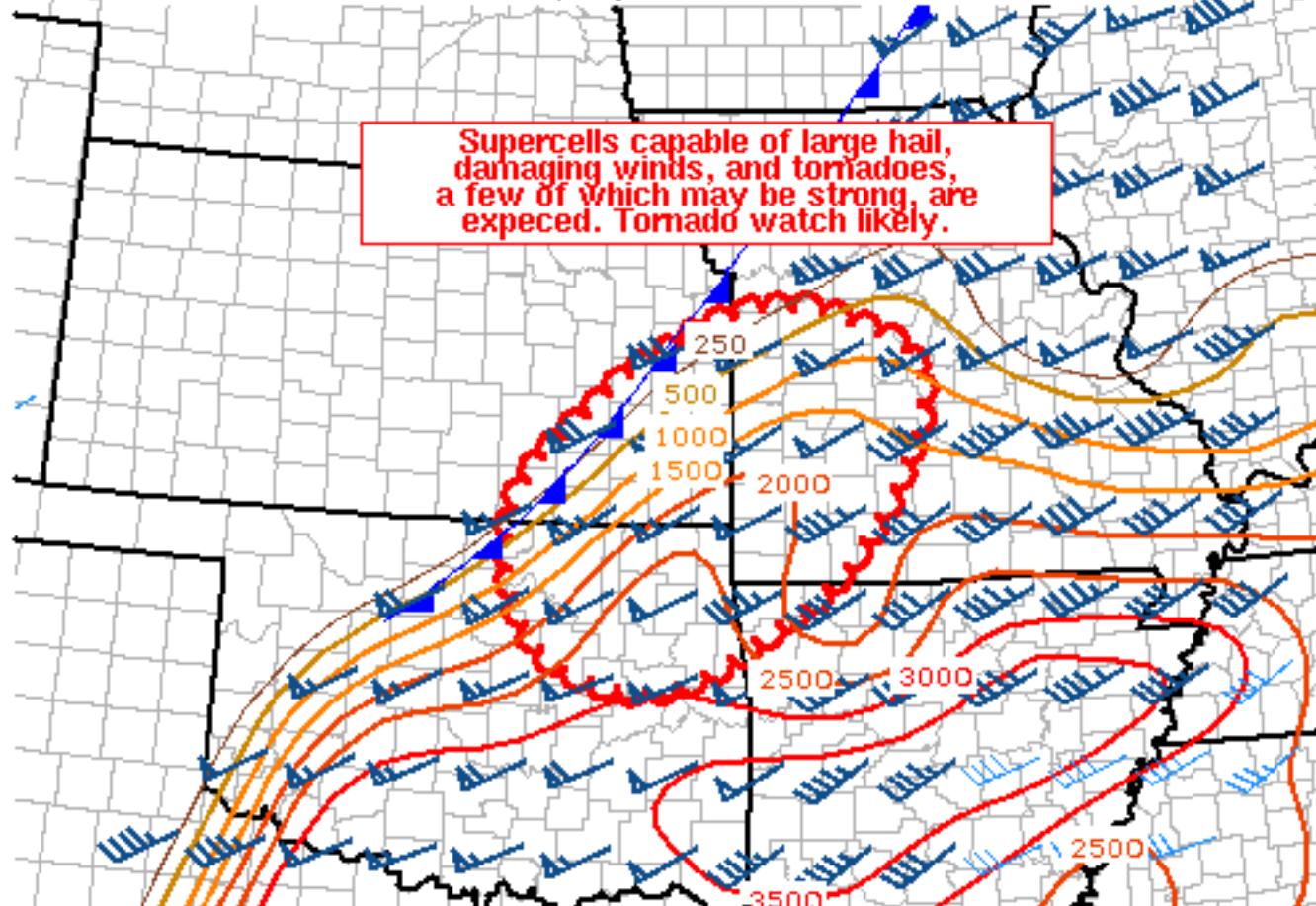
SPC Feedback

Mesoscale Discussion 734

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190522/1900 MLCAPE j/kg and Effective Bulk Shear kt



SPC MCD #0734

Mesoscale Discussion 0734

NWS Storm Prediction Center Norman OK

0306 PM CDT Wed May 22 2019

Areas affected...Northeast Oklahoma...Southeast Kansas...Southwest Missouri...and Northwest Arkansas

Concerning...Severe potential...Watch likely

Valid 222006Z - 222200Z

Probability of Watch Issuance...95 percent

SUMMARY...Supercells capable of large hail, damaging winds, and tornadoes -- a few of which may be strong -- are expected. A tornado watch is likely.

DISCUSSION...Visible satellite shows boundary layer cumulus developing over portions of northeast Oklahoma, southeast Kansas, northwest Arkansas, and southwest Missouri, as low-level moisture advects northward across the region. Surface dew points in the low



70s F are overspreading the region, ahead of a stalled cold front. Along the front, elevated convection has developed and is moving parallel to the boundary. With continued diabatic heating and low-level moisture advection, further destabilization can be expected, with MLCAPE values of 3000-4000 J/kg developing by late afternoon.

Given these thermodynamic conditions, convective initiation is expected within the next 1-2 hours. Convection along the front may eventually root into the boundary layer, and additional storms may develop in the warm sector, particularly in southern parts of the MCD area. As storms develop, effective bulk shear of 50-55 kt will help organize the convection into supercell structures. With effective SRH exceeding $200 \text{ m}^2/\text{s}^2$, tornadoes -- a few of which could be strong -- are possible, along with the threat for large hail and damaging winds. A tornado watch will likely be issued within the next hour.

..Karstens/Hart.. 05/22/2019

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

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