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Mesoscale Discussion 588

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500 mb SEVERE THREAT WILL MOVE EASTWARD INTO THE ASTERN PART OF WW 182 OVER NEXT FEW HOURS

14C 1000

1/kg

2000

1/kg

2500

1/kg

MCAPE

News

Organization

Mesoscale Discussion 0588 NWS Storm Prediction Center Norman OK 0822 PM CDT Thu May 14 2020

Areas affected...Northeast Kansas...Western and Northern Missouri...Far Southern Iowa

SPC MCD #0588

Concerning...Severe Thunderstorm Watch 182...

Valid 150122Z - 150315Z

The severe weather threat for Severe Thunderstorm Watch 182 continues.

SUMMARY...A severe threat will continue for several more hours across northeast Kansas, northern Missouri and far southern Iowa. The storms will gradually move eastward and should impact the eastern part of WW 182.

DISCUSSION...An MCS is ongoing along a pre-frontal surface trough from southern Iowa southwestward to northeast Kansas. The RAP is analyzing moderate instabity from near the surface trough eastward across much of eastern Kansas and central to northern Missouri. Three clusters of strong to severe thunderstorms are ongoing in the vicinity of WW 182. The first is in northwest Missouri near the axis of a 700 mb jet. This area is slightly less unstable but more strongly sheared. Storm mode has mostly been linear suggesting a wind damage and hail threat will continue across northwest Missouri.

The second area of strong to severe thunderstorms is located in central to northeast Kansas where MLCAPE is higher (MLPCAPE of 2500 to 3500 J/kg). This combined with steep mid-level lapse rates and moderate deep-layer shear will be sufficient for supercells with large hail. As cells merge and a line organizes over the next few hours, the wind damage threat is expected to increase. This activity should move eastward across the remainder of northeast Kansas and may affect parts of far western Missouri later this evening.

The third area of strong to severe thunderstorms is located in northeast Missouri near a maxima in instability (MLCAPE near 2500 J/kg). This area has slightly less deep-layer shear than further to the north suggesting the storms will remain mostly unorganized. A wind damage and hail threat may exist with the stronger cores.

..Broyles.. 05/15/2020

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

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Page last modified: May 15, 2020

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