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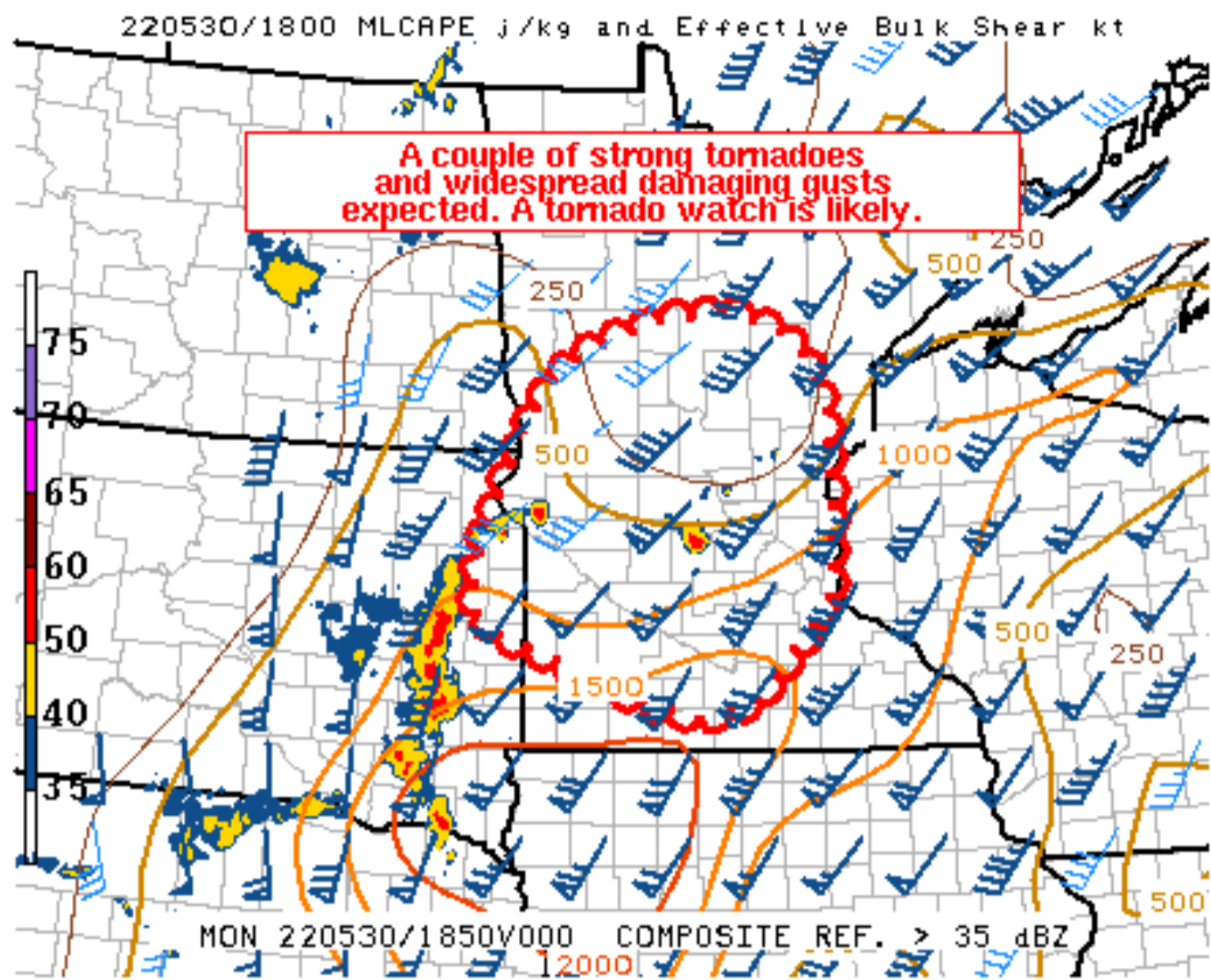
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Mesoscale Discussion 980

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SPC MCD #0980

Mesoscale Discussion 0980
 NWS Storm Prediction Center Norman OK
 0206 PM CDT Mon May 30 2022

Areas affected...extreme eastern SD into southern/central MN

Concerning...Severe potential...Tornado Watch likely

Valid 301906Z - 302030Z

Probability of Watch Issuance...95 percent

SUMMARY...The threat for strong tornadoes and widespread intense gusts is increasing across extreme eastern South Dakota into southern/central MN. A tornado watch will be needed in the next hour.

DISCUSSION...A surface warm front over southern MN will continue to lift northward through the afternoon. Dewpoints will increase into the mid/upper 60s as this occurs, resulting in rapid destabilization with northward extent over the next few hours. Recent visible satellite imagery shows increasing/vertically developing cumulus across portions of southern MN to the south of the warm front. A recent RAOB near Tyler, MN indicated weakening surface-based and MLCIN with very steep midlevel lapse rates in place. Effective shear magnitudes greater than 50 kt will support organized supercells, while strong forcing may tend to favor bowing segments, and a mixed convective mode is possible. Enlarged low-level hodographs evident in regional RAOBs/VWPs and forecast soundings show 30-40 kt 0-1 km shear amid enhanced low-level vorticity. This will support intense rotation with any discrete or line-embedded supercells, and a couple of significant tornadoes will be possible into early evening.

Hi-res operational CAMs guidance and the experiment Warn-on-Forecast ensemble has been persistent in developing at least a couple of discrete supercells ahead of linear convection. While convective evolution/storm mode remains somewhat unclear, the overall parameter space will support storms capable of producing strong tornadoes and widespread intense (greater than 75 mph) outflow winds. A higher-end tornado watch will likely be needed within the hour.

..Leitman/Thompson.. 05/30/2022

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

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