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Mesoscale Discussion 648

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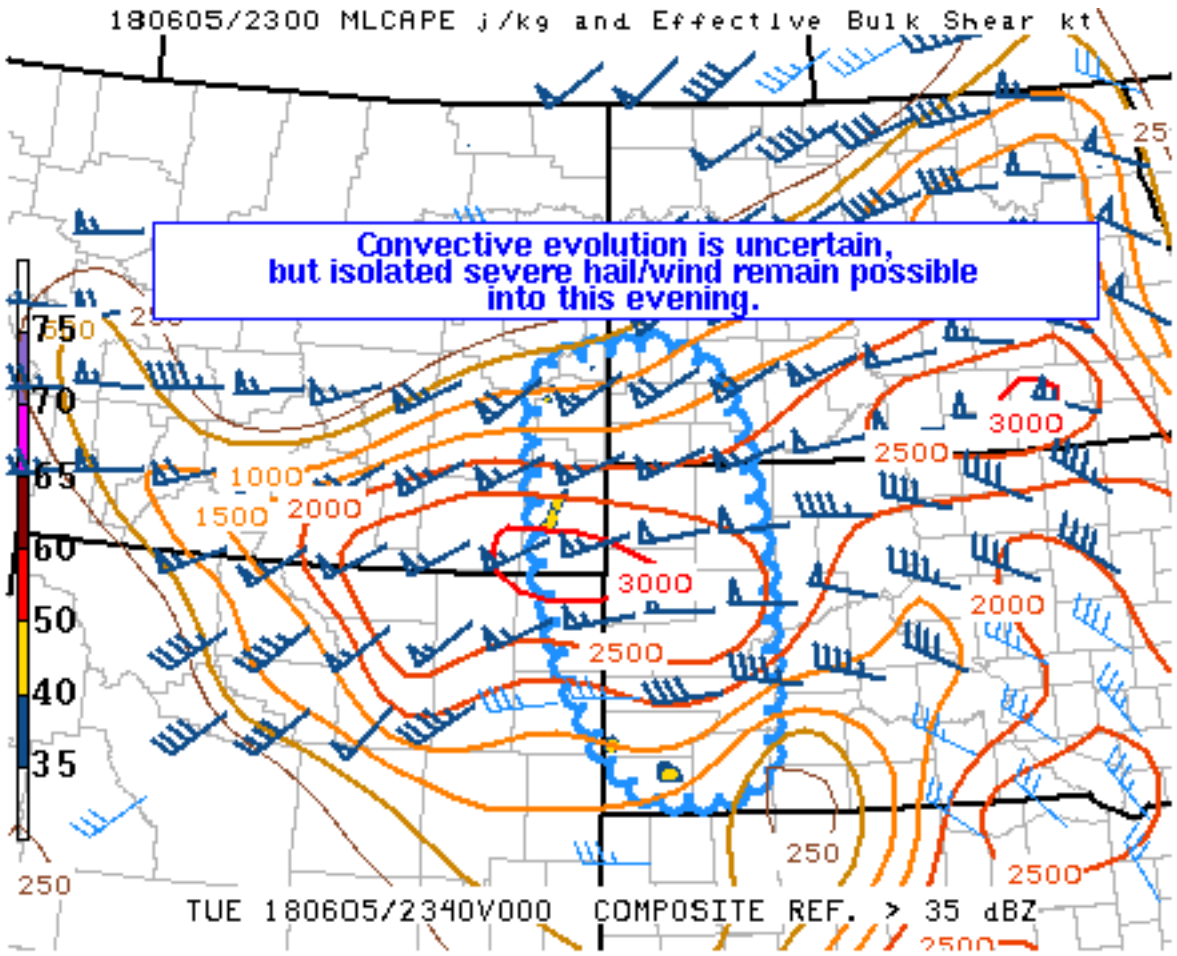

SPC MCD #0648

Mesoscale Discussion 0648
NWS Storm Prediction Center Norman OK
0654 PM CDT Tue Jun 05 2018

Areas affected...Southeast MT...Northeast WY...Western SD...Southwest ND

Concerning...Severe potential...Watch unlikely

Valid 052354Z - 060200Z

Probability of Watch Issuance...20 percent

SUMMARY...Convective evolution is uncertain, but at least isolated severe wind/hail will be possible into this evening.

DISCUSSION...At 2345Z, convection is rapidly intensifying across southeast MT, with elevated storms noted further north into east-central MT. This activity appears to be associated with a midlevel shortwave trough moving through central/eastern MT. Forecast soundings modified for observed surface conditions indicate

a relative minimum in MLCINH across southeast MT into northwest SD, indicating the potential for surface-based storms. MLCAPE of 1500-2500 J/kg and effective shear of 40-50 kts are supportive of organized storm structures, including the potential for supercells with an associated large hail risk. The evolution of this convection is uncertain given stronger capping noted further east, but at least a small window exists with the potential for a supercell or two from southeast MT into northwest SD and potentially far southwest ND.

Further south, a thunderstorm cluster is spreading northeastward across western SD. This convection initiated in a region of weaker midlevel flow/effective shear, and as a result has quickly become outflow dominant. A short-term threat for severe wind gusts (and possibly marginally severe hail) will exist with this activity, before it likely weakens later this evening as it moves into a strongly capped environment further east. In addition, the outflow from this cluster will eventually spread into northwest SD/southwest ND, and may interact with the developing convection in that region with some potential for upscale growth.

Given the uncertainties mentioned above, the need for watch issuance remains unclear, though if convection across southeast MT continues to intensify, a watch may be needed to cover that threat in addition to the threat further northeast, which was covered in MCD 647.

..Dean/Hart.. 06/05/2018

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

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