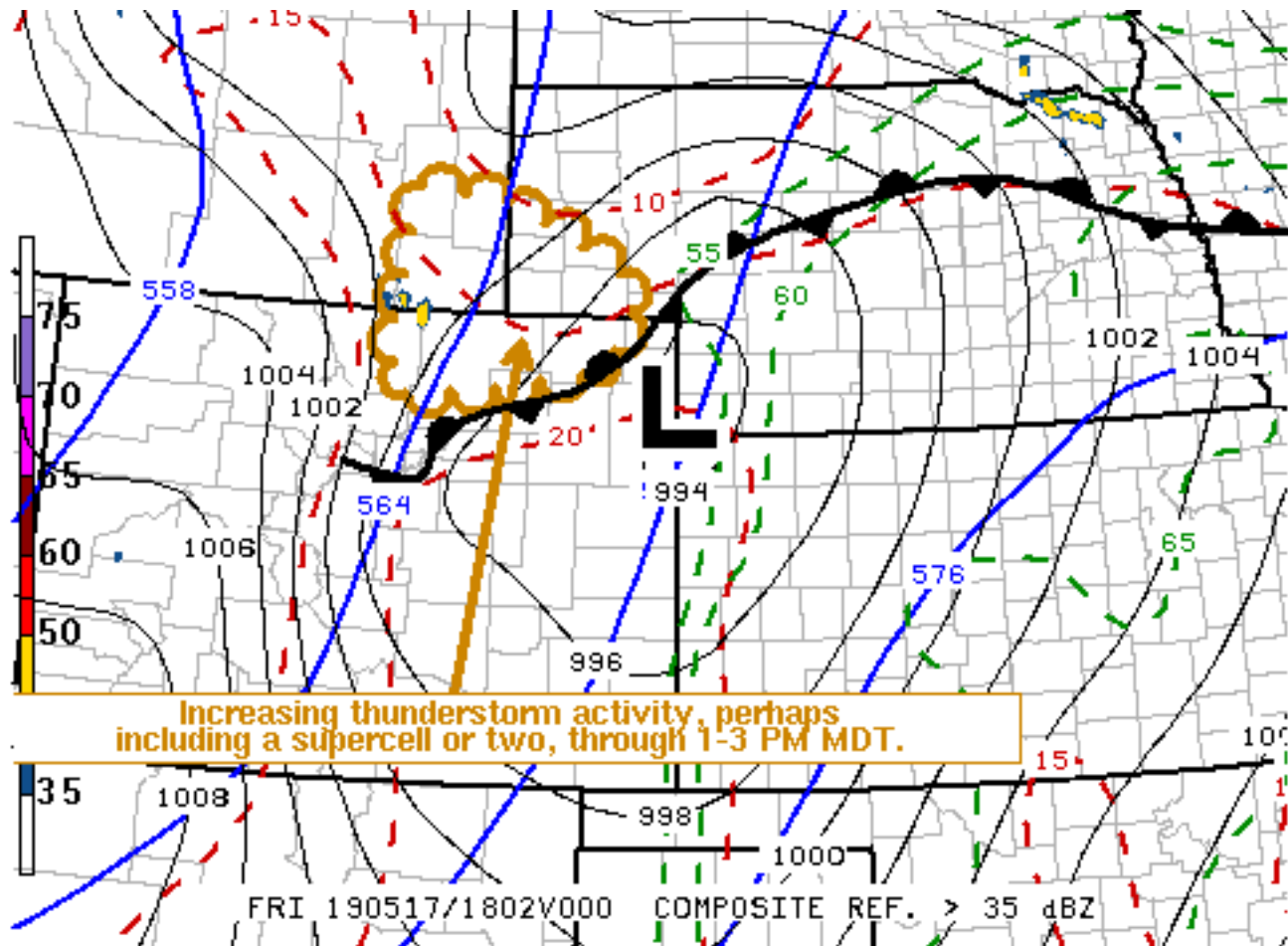


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Mesoscale Discussion 648

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SPC MCD #0648

Mesoscale Discussion 0648

NWS Storm Prediction Center Norman OK

0114 PM CDT Fri May 17 2019

Areas affected...Parts of northeast Colorado...southeast Wyoming...southwest Nebraska

Concerning...Severe potential...Watch possible

Valid 171814Z - 172015Z

Probability of Watch Issuance...60 percent

SUMMARY...Thunderstorm development is expected to increase near the Cheyenne Ridge vicinity through 1-3 PM MDT. This will be accompanied by at least some increase in severe weather potential. The need for a watch is not yet certain, but trends are being monitored for this possibility.

DISCUSSION...Insolation within a relatively moist post-frontal boundary layer near the Cheyenne Ridge appears to have contributed



to a corridor of weak to modest CAPE of 500-1000 J/kg. This destabilization has contributed to the initiation of thunderstorm activity along the Front Range, to the south-southwest of Cheyenne, aided by orography and forcing for ascent associated with at least one initial short wave perturbation pivoting northeastward into the high Plains.

In general, the leading edge of stronger mid-level height falls and lower/mid-tropospheric cooling are forecast to continue gradually spreading eastward across the high Plains through mid to late afternoon. As this occurs, vigorous thunderstorm activity is expected to spread off the higher terrain, along the Cheyenne Ridge. Some upscale growth is possible, preceded by additional discrete thunderstorm development.

Given pronounced veering of wind fields with height beneath 50+ kt southwesterly 500 mb flow, vertical shear is strong and supportive of organizing convection, including supercells. This may be accompanied by primarily a risk for severe hail, but a relatively short-lived tornado or two is possible, along with perhaps some increase in potential for strong surface gusts by late afternoon.

..Kerr/Hart.. 05/17/2019

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

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