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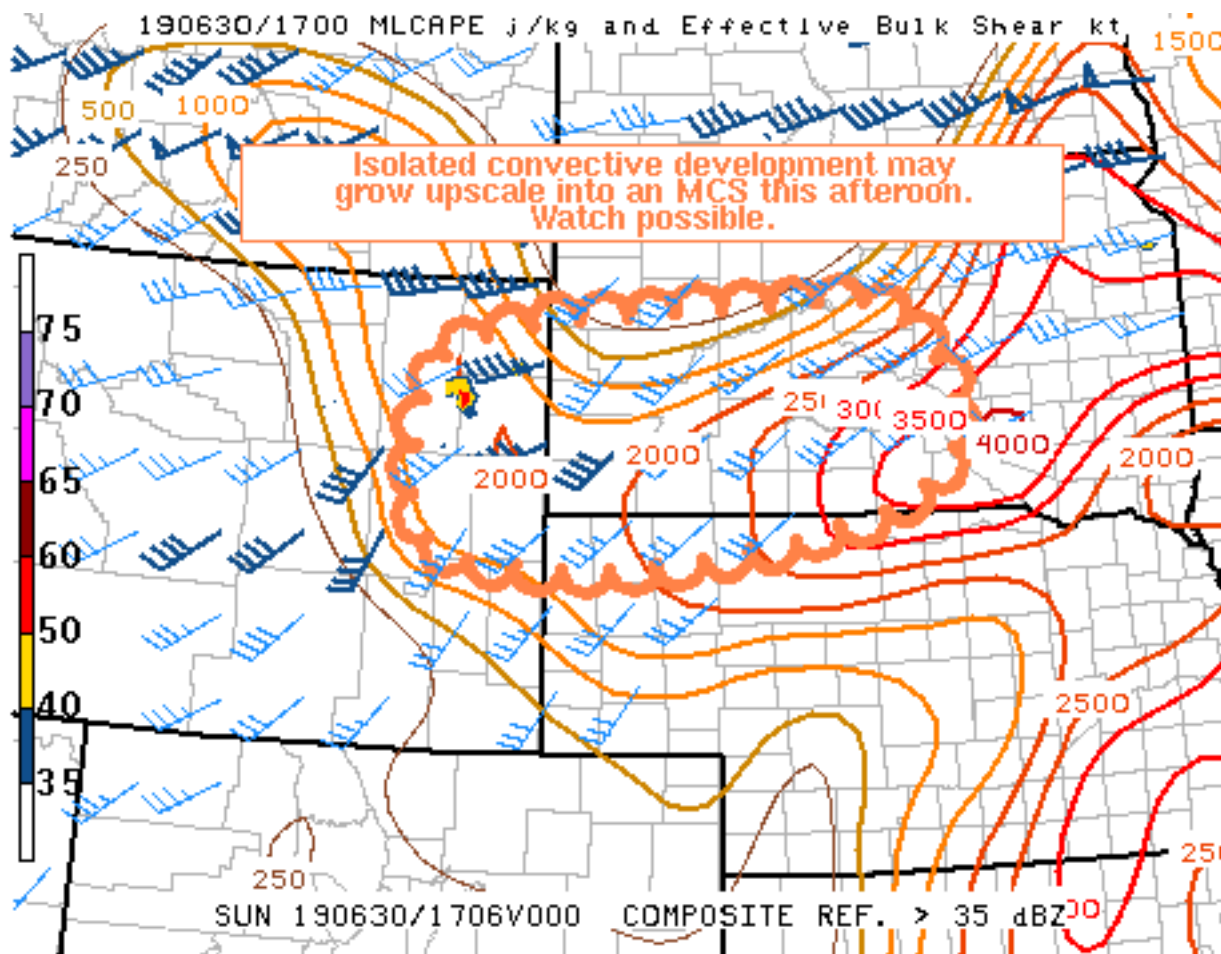
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Mesoscale Discussion 1314

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SPC MCD #1314

Mesoscale Discussion 1314
 NWS Storm Prediction Center Norman OK
 1223 PM CDT Sun Jun 30 2019

Areas affected...Northeast Wyoming...Southern/Southwest South Dakota...and Northwest Nebraska

Concerning...Severe potential...Watch possible

Valid 301723Z - 301900Z

Probability of Watch Issuance...60 percent

SUMMARY...Isolated convective development may grow upscale into an MCS this afternoon. Watch possible.

DISCUSSION...Regional radar shows an isolated severe storm developed in Campbell county Wyoming, with additional convective development occurring in Weston/Crook counties. The latest mesoanalysis shows low-level northeasterly upslope flow occurring in proximity to this activity, from southwest South Dakota/Nebraska Panhandle into



northeast Wyoming, with low/mid 60s F dew point temperatures now present across the region. With some modest insolation this morning, the airmass is continuing to destabilize, with MLCAPE of 1500-2000 J/kg analyzed at 17z. Meanwhile, marginally enhanced southwesterly mid-level flow is yielding near 40 kt of effective bulk shear.

The convective evolution over the region in the next few hours remains somewhat uncertain at this time. A few members of the 12z HREF convection-allowing guidance were able to depict initiation in this region and subsequently grow the convection upscale into a forward-propagating MCS capable of a severe wind/hail threat, tracking mainly through southern South Dakota during the afternoon. Given the aforementioned kinematic/thermodynamic indices, this scenario seems plausible, particularly along the analyzed instability axis where additional heating and greater low-level downstream moisture should yield MLCAPE of 3000+ J/kg this afternoon amidst a broad region of 45-50 kt effective bulk shear. Given the potential for this scenario to unfold, a watch may be needed for parts of the region this afternoon and convective trends will continue to be monitored.

..Karstens/Grams.. 06/30/2019

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

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NOAA / National Weather Service
National Centers for Environmental Prediction
Storm Prediction Center
120 David L. Boren Blvd.
Norman, OK 73072 U.S.A.
spc.feedback@noaa.gov
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