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Mesoscale Discussion 1186

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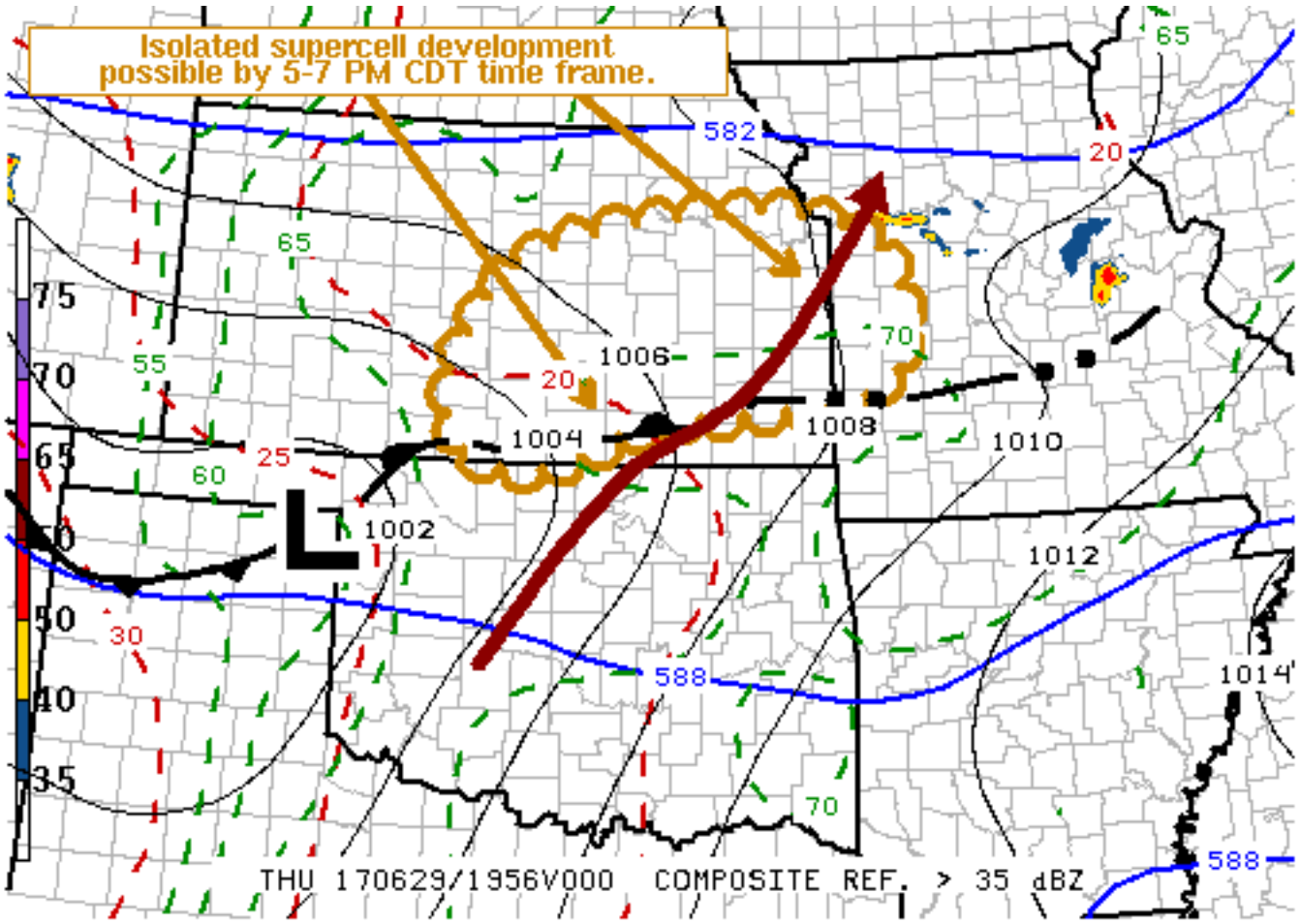

SPC MCD #1186

Mesoscale Discussion 1186
NWS Storm Prediction Center Norman OK
0312 PM CDT Thu Jun 29 2017

Areas affected...South central through eastern Kansas and adjacent portions of western Missouri

Concerning...Severe potential...Watch possible

Valid 292012Z - 292245Z

Probability of Watch Issuance...60 percent

SUMMARY...Isolated supercell development is possible as early as the 5-7 PM CDT time frame, which could be accompanied by a risk for tornadoes, in addition to severe hail and potentially damaging wind gusts. A watch probably will be needed once storm initiation become more certain.

DISCUSSION...A stalled outflow boundary across portions of the Missouri Ozarks into southern Kansas remains a potential focus for

rapid new thunderstorm development late this afternoon. Strong heating of seasonably high boundary layer moisture content along this boundary, beneath fairly steep mid-level lapse rates associated with warm elevated mixed layer air, appears to be contributing to CAPE on the order of 2000-3000 J/kg. This is occurring in the presence of moderate to strong vertical shear associated with veering winds with height from lower to mid-levels, beneath a belt of 30-40 kt westerly 500 mb flow. And the environment appears more than conducive to organized severe storm development, including supercells at least initially.

Forcing to support any such development remains unclear, as the warm elevated mixed layer air is also contributing to substantial mid-level inhibition. Near the nose of the corridor of strongest surface heating emanating from the higher Plains, the latest Rapid Refresh indicates an area of locally enhanced low-level convergence near/southwest of the Wichita area, which could provide a focus for the initiation of storms late this afternoon. This is near/within a broader zone of enhanced lower/mid tropospheric warm advection which extends northward/eastward, toward the Kansas City area and Missouri Ozarks. This could also provide support for the initiation of storms, though this would seem most probable along the mid-level thermal gradient to the north of the stronger capping, near/southwest through southeast of the Kansas City metropolitan area.

When/if storms do develop, a 20-30 kt southerly 850 mb jet may contribute to sufficient low-level shear to support a risk for tornadoes with any discrete storms.

..Kerr/Guyer.. 06/29/2017

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

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