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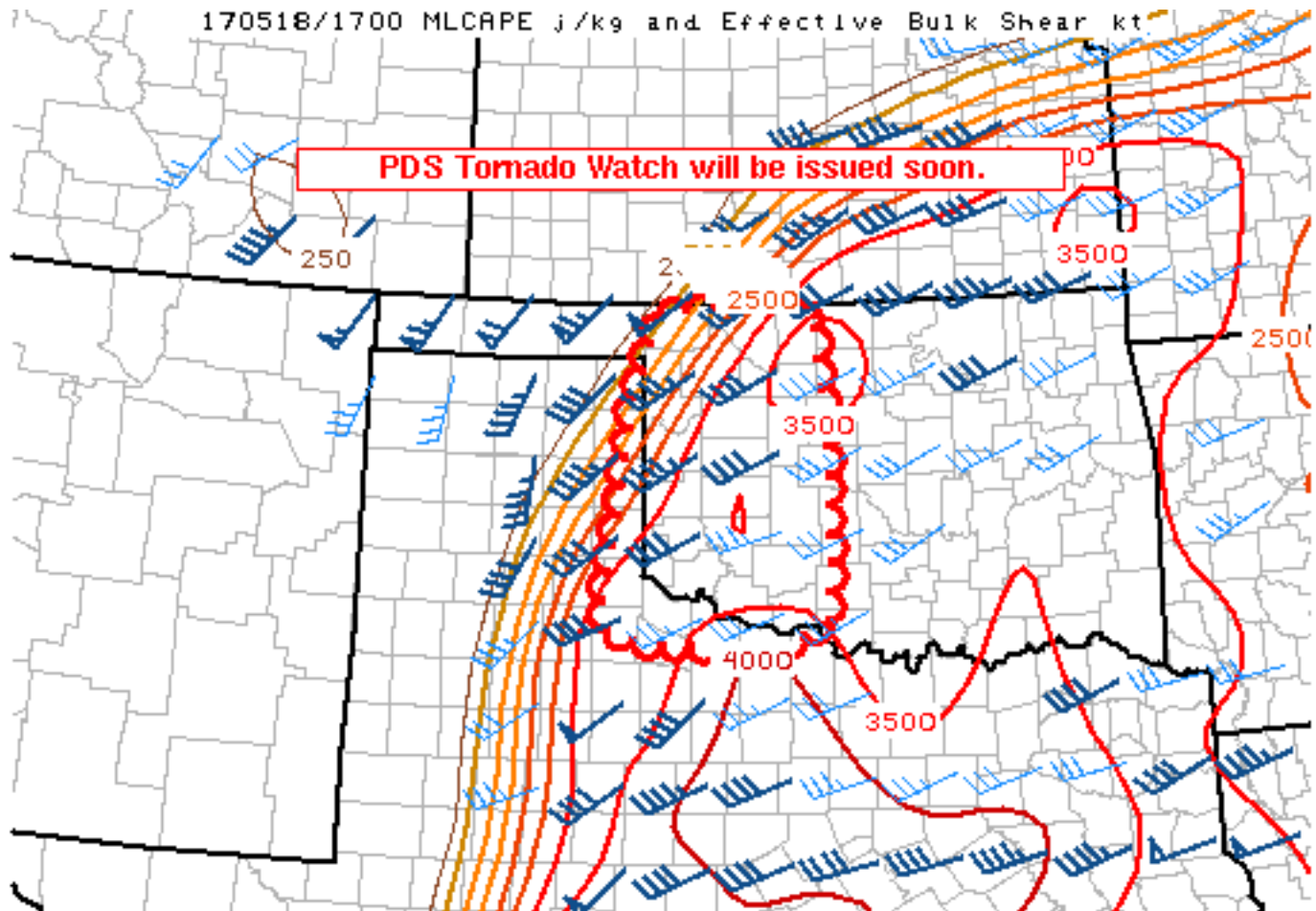
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Mesoscale Discussion 756

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SPC MCD #0756

Mesoscale Discussion 0756
 NWS Storm Prediction Center Norman OK
 1259 PM CDT Thu May 18 2017

Areas affected...Portions of western/central Oklahoma

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

Valid 181759Z - 182000Z

Probability of Watch Issuance...95 percent

SUMMARY...Severe thunderstorms will develop across portions of western Oklahoma this afternoon. Tornadoes, a few of which may be strong, very large hail, and damaging winds will be possible. A PDS (Particularly Dangerous Situation) tornado watch will be issued within the next hour.

DISCUSSION...As mid-level forcing for ascent gradually increases this afternoon, thunderstorms will increase in coverage across much of the region over the next 1-3 hours. Surface observations indicate

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dew points have risen into the mid/upper 60s over much of the discussion area. Wave/billow structures on visible satellite suggest convective inhibition remains over parts of Oklahoma and Kansas this afternoon, but continued boundary-layer heating/moistening and cooling aloft are forecast to remove any remaining inhibition. In turn, as the dry line focuses near the Oklahoma/Texas border, thunderstorms will develop and likely become severe quite quickly. Moreover, open warm sector development is also possible across portions of southwest Oklahoma, within zones of confluence and differential heating.

With the presence of moderate/strong buoyancy (around 2500–3500 J/kg of MLCAPE) and effective shear upwards of 45–50 kt, initial supercellular modes appear probable. Some forecast soundings indicate a deep-layer wind profile marginally supportive of a few left splits with initial warm sector development east of the dry line this afternoon. Cell mergers/interference would preclude a higher-end severe threat. However, as low-level hodographs enlarge (with greater clockwise looping) late this afternoon into this evening, cyclonically rotating supercells may become favored, with a greater eastward component of movement. Any such discrete cell would possess a threat for tornadoes (which could be strong), very large hail, and damaging winds.

Farther west along the dry line, severe thunderstorms will likely organize near the Oklahoma/Texas Panhandle border. Some potential exists for northward-moving cells (from initial convection to the south) to interfere with these cells, as well as cause convective overturning, which would limit the severe threat some. However, the genesis region of the southern cells, as well as their expected motion, will likely keep them east of cells generating along the dry line. In turn, a relatively pristine air mass should exist for supercellular development by mid/late afternoon. Backed surface flow and increasing boundary-layer moisture ahead of the dry line will favor a threat of tornadoes, a few of which could be strong. Very large hail and damaging winds will also be possible. A PDS (Particularly Dangerous Situation) tornado watch will be issued within the next hour.

..Picca/Goss.. 05/18/2017

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

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