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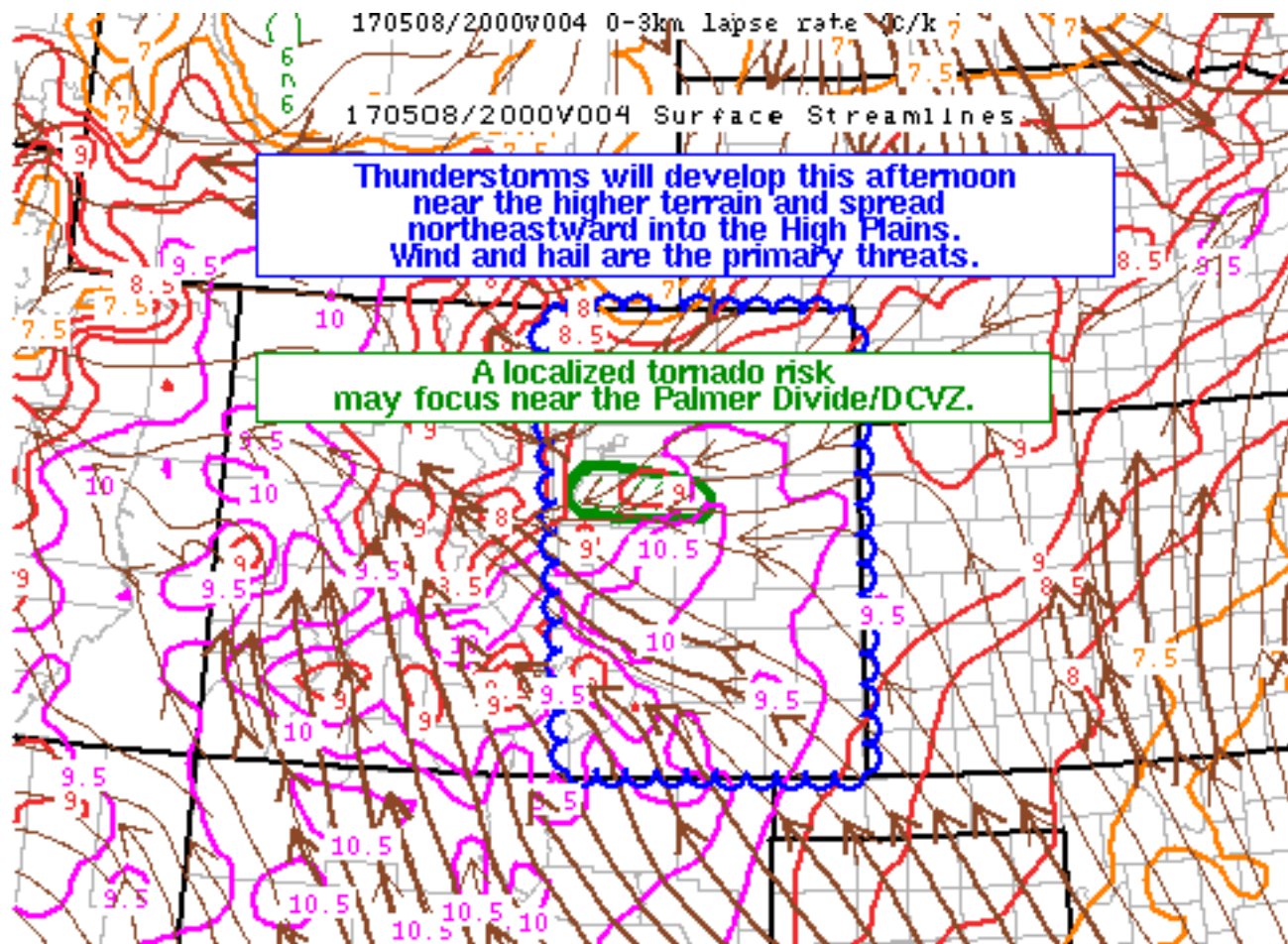
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Mesoscale Discussion 662

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SPC MCD #0662

Mesoscale Discussion 0662

NWS Storm Prediction Center Norman OK

0101 PM CDT Mon May 08 2017

Areas affected...the eastern half of Colorado

Concerning...Severe potential...Watch likely

Valid 081801Z - 081930Z

Probability of Watch Issuance...80 percent

SUMMARY...Thunderstorms will develop this afternoon near the higher terrain and spread northeastward into the High Plains. Severe wind gusts 60-75 mph are likely with the more intense microbursts. Large hail will accompany the stronger cores, especially early during the convective life cycle. A localized tornado risk is possible near the Palmer Divide/Denver Convergence Vorticity Zone.

DISCUSSION...17z subjective surface mesoanalysis places a cool front/wind shift in the vicinity of the Palmer Divide and near the

El Paso/Elbert County border. An adequately moist boundary layer resides over the CO High Plains with 45-50 degrees F dewpoints. Upslope flow to the north of the front and an easterly component to the flow south of the front suggest the higher terrain will be favored for initial storm development. Visible satellite imagery shows mostly sunny skies with strong heating occurring and a swelling cumulus field over the higher terrain.

Additional heating will further destabilize the airmass as surface-500 mb lapse rates reach or locally exceed 9 degrees C/km and lead to moderate buoyancy (1000-2000 J/kg MLCAPE). Moderate mid- to high-level southerly flow will result in 25-30 kt effective shear south of the front and 30-40 kt north of the boundary. The initial stronger storms will be capable of a large hail/severe gust risk. A risk for a tornado will seemingly focus in the DCVZ vicinity before storm coverage substantially increases late this afternoon/early evening. PW around 3/4 inch, a sufficiently strong wind profile favoring organized multicells/supercells, very steep lapse rates favoring evaporatively cooled downdrafts, coupled with a cluster/linearly organized cold pool structure will combine to support a substantial risk for scattered severe gusts. The risk for severe gusts will probably maximize during the 22-02z period with storm intensity lessening towards the KS/CO border as diurnal cooling and a capping inversion lower the overall severe threat.

..Smith/Hart.. 05/08/2017

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

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