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Mesoscale Discussion 596

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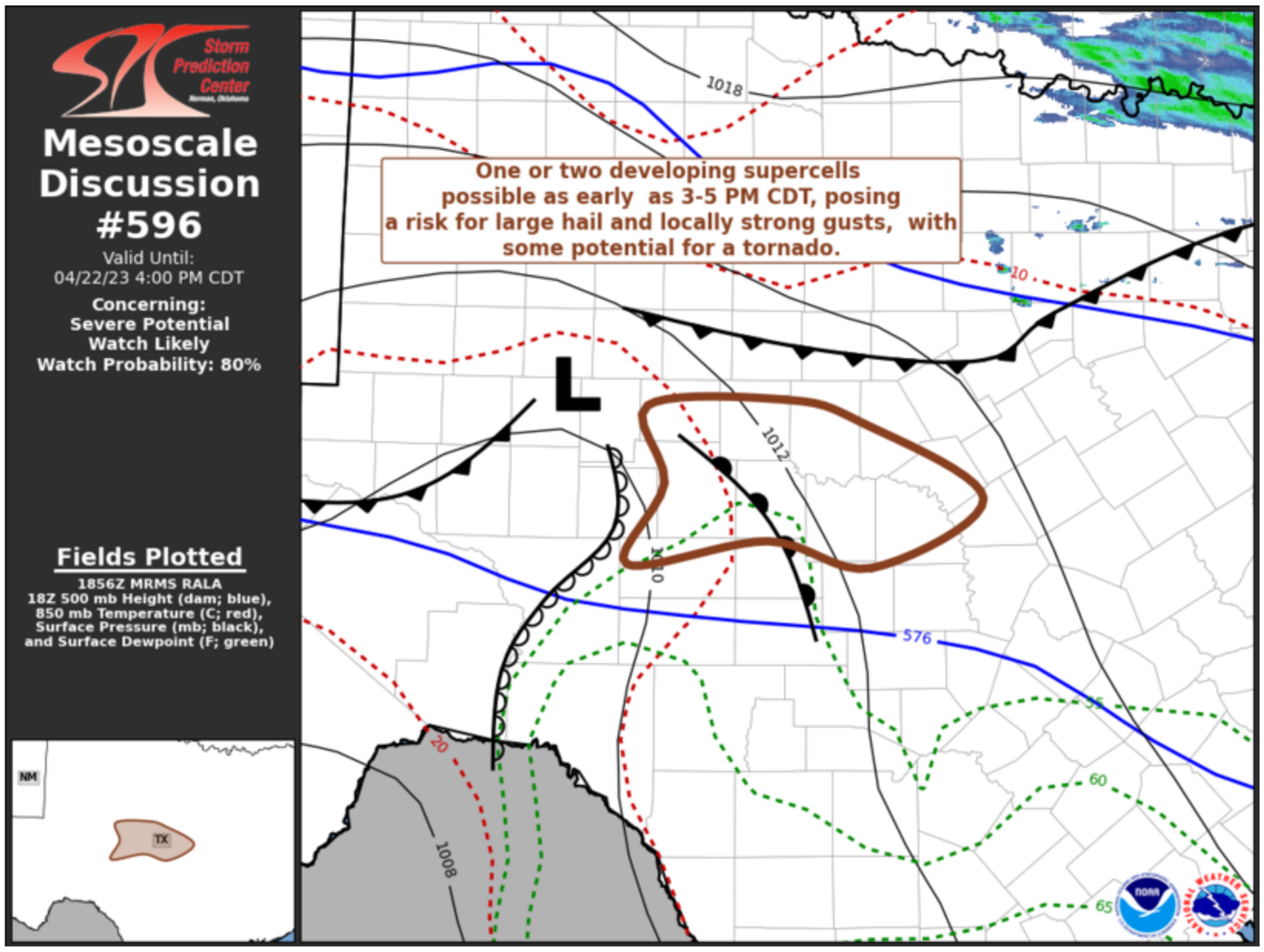

Mesoscale Discussion 0596
NWS Storm Prediction Center Norman OK
0158 PM CDT Sat Apr 22 2023

Areas affected...the Texas Edwards Plateau vicinity

Concerning...Severe potential...Watch likely

Valid 221858Z - 222100Z

Probability of Watch Issuance...80 percent

SUMMARY...The initiation of scattered thunderstorms, including one or two developing supercells, appears possible by 3-5 PM CDT. These storms will pose a risk for large hail, locally strong surface gusts, and at least some potential for a tornado.

DISCUSSION...Beneath modestly steep mid-level lapse rates, lower-level lapse rates are becoming very steep in response to insolation and deepening boundary-layer mixing. This is focused either side of a sharpening dryline wrapping into a weak surface low to the northwest of San Angelo. East of the dryline, boundary-layer moisture remains characterized by mid/upper 50s surface dew points, but it appears that this is sufficient to support mixed-layer CAPE in excess of 1000 J/kg.

Attempts at deepening boundary-layer based convective development are ongoing near the surface low center, as well as within, at least initially, a bit more elevated warm advection regime east-southeastward into areas northeast of San Angelo. As inhibition for boundary-layer parcels erodes further with additional heating and large-scale ascent, it appears that thunderstorms may initiate as early as 20-22Z, before increasing and intensifying through the remainder of the afternoon.

Although low-level wind fields are generally modest to weak, strong deep-layer shear beneath at least broadly cyclonic, 50+ kt flow around 500 mb is sufficient for organized severe convection. The evolution of one or two sustained supercells is possible, which probably will be accompanied by a risk for large hail, locally strong surface gusts, and at least some risk for producing a tornado, while slowly propagating southeastward.

..Kerr/Hart.. 04/22/2023

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

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