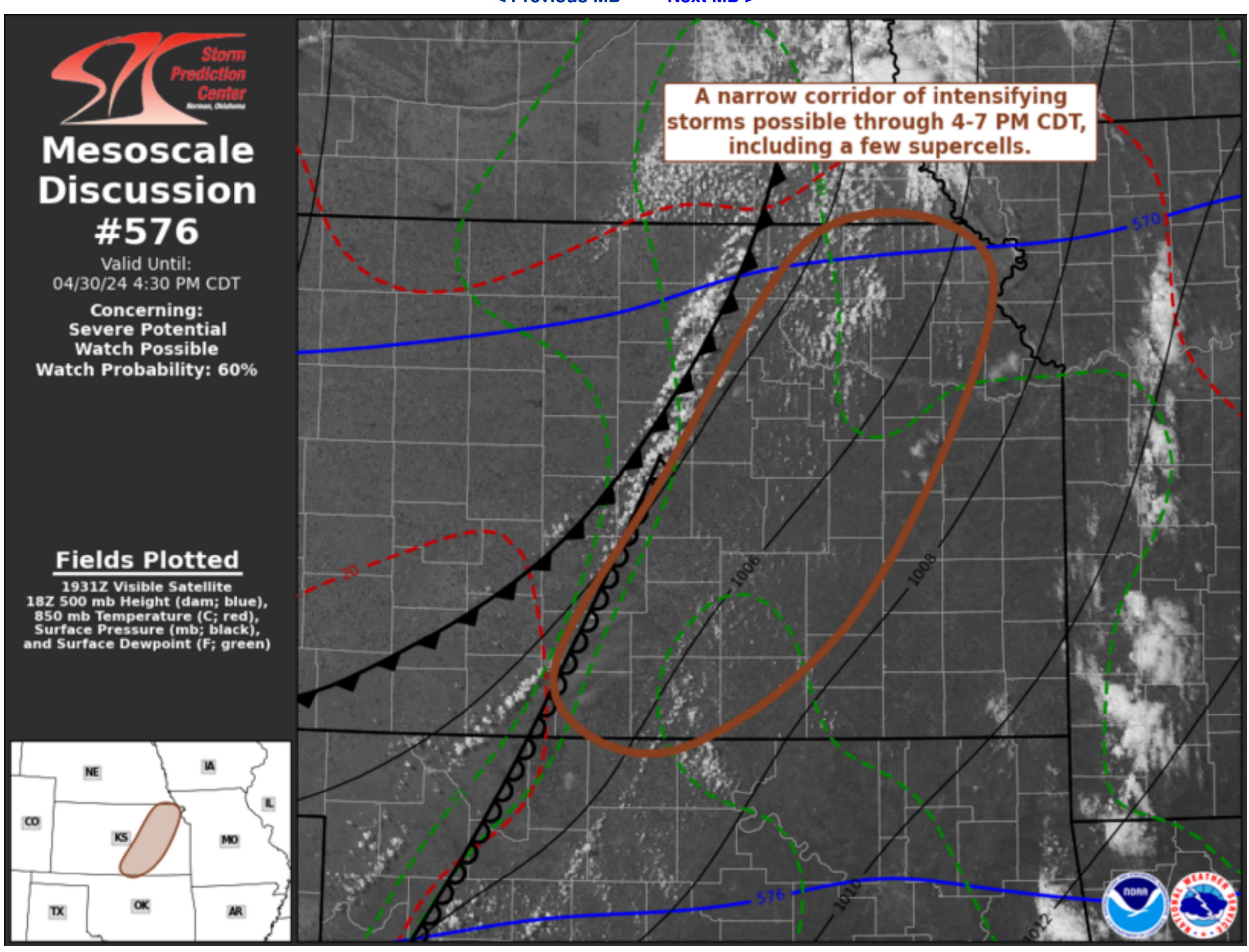


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Mesoscale Discussion 576
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Mesoscale Discussion 0576
 NWS Storm Prediction Center Norman OK
 0235 PM CDT Tue Apr 30 2024

Areas affected...parts of eastern Kansas

Concerning...Severe potential...Watch possible

Valid 301935Z - 302130Z

Probability of Watch Issuance...60 percent

SUMMARY...Intensifying thunderstorm development is probable through 4-7 PM CDT, including a few supercells with potential to produce large hail, locally damaging wind gusts and a risk for tornadoes.

DISCUSSION...To the south of a strong, broadly cyclonic mid/upper jet nosing east of the Front Range, toward the the middle Missouri Valley, warm elevated mixed-layer air remains inhibitive to convective development in the presence of weak to negligible mid/upper forcing for ascent. However, where the cold front is overtaking a sharpening dryline across the Salina vicinity of north central Kansas, more notable deepening of convective development is ongoing.

Aided by a corridor of stronger pre-frontal boundary-layer heating, including surface temperatures exceeding 90F along an axis across northwestern Oklahoma into the Salina vicinity, mixed-layer CAPE now appears in excess of 2000 J/kg along the sharpening dryline. With additional insolation, it appears that low-level forcing near the cold front/dryline intersection may become sufficient to support sustained thunderstorm development as early as 21-22Z. In the presence of moderate but veering flow with height in the 850-500 mb layer, vertical shear will be conducive to supercell development, at least initially, and perhaps an upscale growing line with persistent supercell development along its southern flank, gradually approaching the Wichita area through early evening.

..Kerr/Hart.. 04/30/2024

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

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