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City, St



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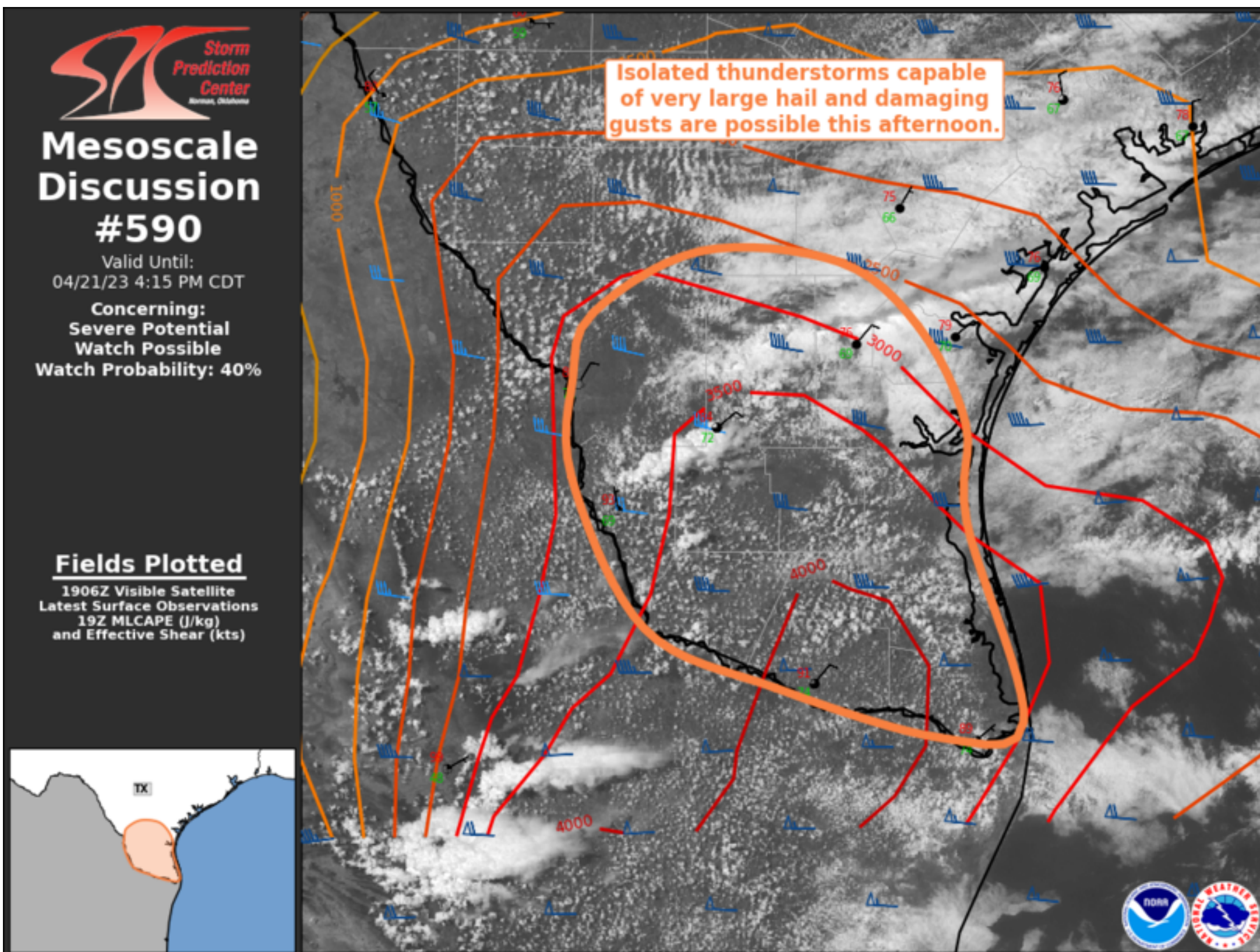
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Mesoscale Discussion 590

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Mesoscale Discussion #590
 Valid Until: 04/21/23 4:15 PM CDT
 Concerning: Severe Potential Watch Possible
 Watch Probability: 40%

Fields Plotted
 1906Z Visible Satellite
 Latest Surface Observations
 19Z MLCAPE (J/kg)
 and Effective Shear (kts)



Mesoscale Discussion 0590
 NWS Storm Prediction Center Norman OK
 0212 PM CDT Fri Apr 21 2023

Areas affected...South TX

Concerning...Severe potential...Watch possible

Valid 211912Z - 212115Z

Probability of Watch Issuance...40 percent

SUMMARY...Isolated thunderstorms capable of very large hail and damaging gusts are possible across south TX this afternoon.

DISCUSSION...Surface observations show temperatures have climbed in the upper 80s/low 90s ahead of a diffuse cold front pushing into the region. These surface temperatures, combined with dewpoints in the upper 60s/low 70s and steep mid-level lapse rates, support strong buoyancy. Recent 18Z BRO sounding sampled over 2800 J/kg of MLCAPE. This sounding also showed relatively deep boundary-layer moisture, with a 100-mb mean mixing ratio of 16.6 g/kg. However, temperatures at the base of the EML (around 800 mb) are near 18 deg C, so even with these relatively warm and moist conditions some convective inhibition remains.

Attempts at deep convective have failed thus far, likely a result of dry-air entrainment. Nevertheless, additional heating and continued attempts at initiation should result in a storm or two. Very large hail (i.e. greater than 2" in diameter) is possible with any sustained updrafts, with some strong outflow likely as well. Overall storm coverage is currently expected to be isolated.

..Mosier/Hart.. 04/21/2023

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

ATTN...WFO...CRP...BRO...

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