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Mesoscale Discussion 1073

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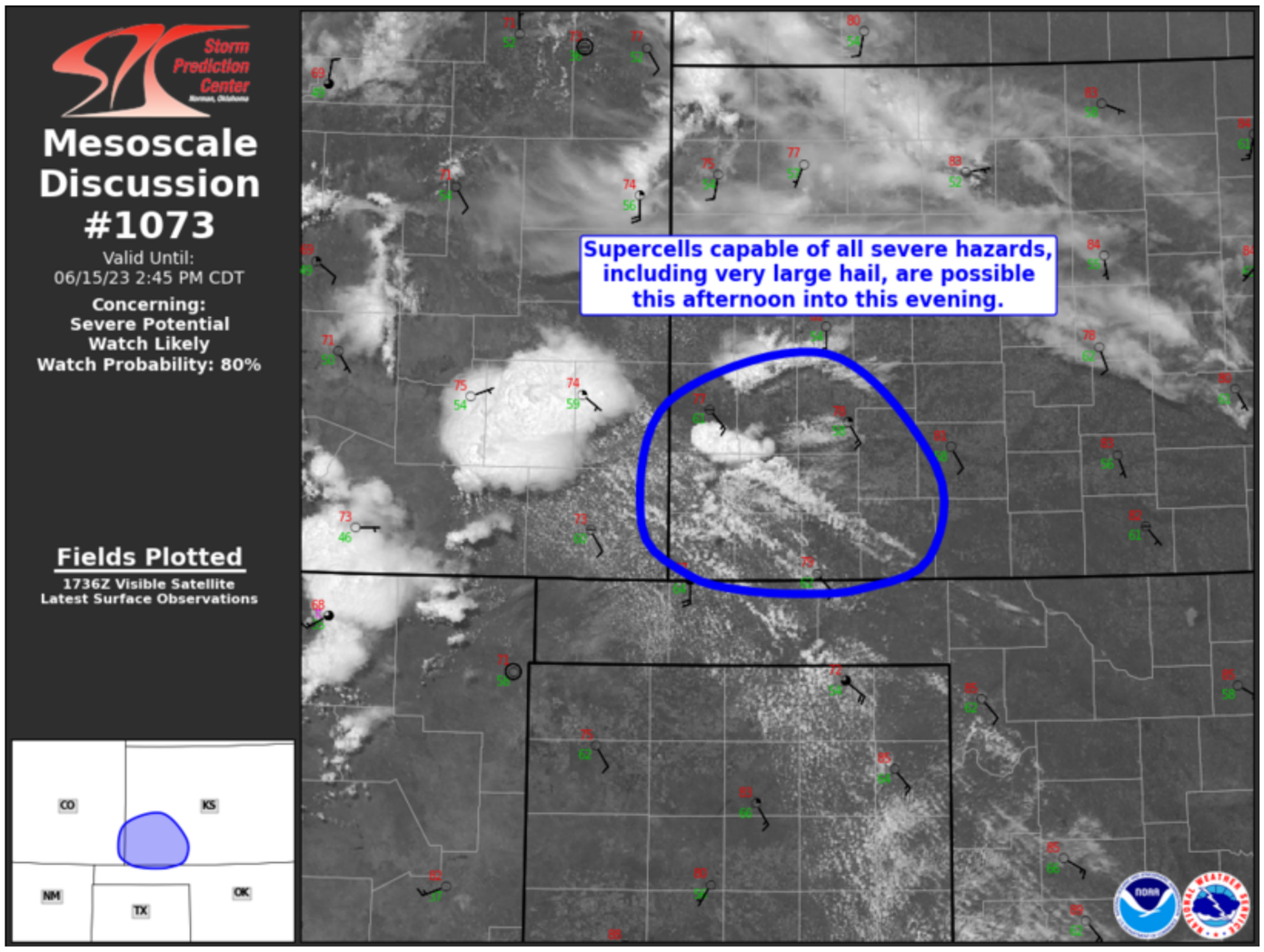

Mesoscale Discussion 1073
NWS Storm Prediction Center Norman OK
1244 PM CDT Thu Jun 15 2023

Areas affected...Southwest KS...Far Southeast CO

Concerning...Severe potential...Watch likely

Valid 151744Z - 151945Z

Probability of Watch Issuance...80 percent

SUMMARY...Supercells capable of all severe hazards, including very large hail, and a tornado or two are possible across far southeast CO into southwest KS this afternoon and evening.

DISCUSSION...Visible satellite imagery has shown an increasingly agitated cumulus field across southwest KS over the past hour or so. A few instances of greater vertical development are now apparent within this field, and the expectation is for eventual thunderstorm initiation as air mass destabilization persists and lift, both attendant to the approaching shortwave trough and withing areas of low-level confluence, increases.

Very steep lapse rates are in place, with mesoanalysis estimating 8.5 to 9 deg C per km from 700 to 500 mb. Continued low-level moisture advection into this region is expected, counteracting any mixing and likely keeping dewpoints in the low 60s. This combination of low-level moisture and steep mid-level lapse rates will result in strong buoyancy, with MLCAPE around 3000 J/kg possible this afternoon. Vertical shear will be stronger farther south, but 30 to 40 kt of effective bulk shear is still anticipated over this area. This should be sufficient for supercells, with very large hail as the primary risk. Some hail may exceed 2.5" in diameter. Strong downdrafts are possible in this region as well. There is some threat for a tornado or two is well, but, despite favorable low-level moisture, LCLs will still be relatively high. The tornado risk does increase with southward extent where stronger southeasterly surface winds are expected.

..Mosier/Thompson.. 06/15/2023

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

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