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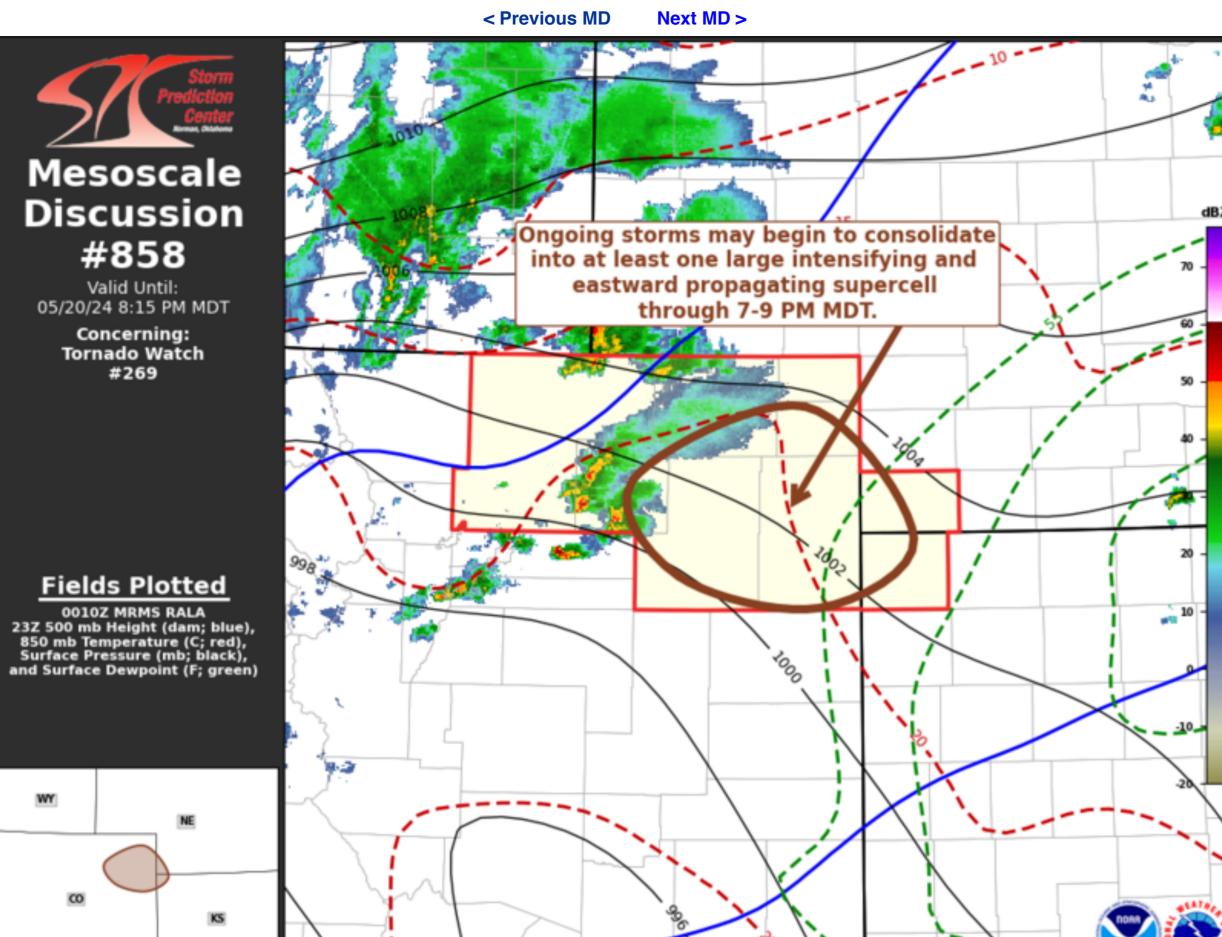
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Mesoscale Discussion 858

Organization

News



Mesoscale Discussion 0858 NWS Storm Prediction Center Norman OK 0713 PM CDT Mon May 20 2024

Areas affected...parts of northeastern Colorado

Concerning...Tornado Watch 269...

Valid 210013Z - 210215Z

The severe weather threat for Tornado Watch 269 continues.

SUMMARY...Ongoing thunderstorms may begin to consolidate into at least one increasingly prominent supercell across and east of the Akron CO vicinity of northeastern Colorado through 7-9 PM MDT. This may be accompanied by a risk for large hail in excess of 2 inches in diameter, locally damaging wind gusts and increasing potential for a tornado or two.

DISCUSSION...Thunderstorms development has been slowly increasing to the north of the Palmer Ridge, with intensification initially slowed by rather modest boundary-layer instability. Downstream of large-scale mid-level troughing crossing the Intermountain West, cyclogenesis is underway to the lee of the southern Rockies. A corridor of strengthening warm advection centered around around the 700 mb level is becoming focused across northeastern Colorado into southwestern Nebraska, and associated forcing for ascent may contribute to consolidation of ongoing storms approaching areas near/northwest of Akron CO through 01-03Z. At the same time, continued boundary-layer moistening on easterly low-level flow beneath steepening lapse rates may contribute to mixed-layer CAPE increasing in excess of 1000-1500 J/kg.

Vertical shear beneath a strong west-southwesterly jet nosing across the southern Rockies into the central Great Plains will support substantive intensification as inflow into convection becomes increasingly unstable. It seems probable that this will include the evolution of at least one prominent supercell, which may tend to remain focused along the baroclinic zone as it propagates eastward within 30+ kt southwesterly deep-layer ambient mean flow.

..Kerr.. 05/21/2024

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

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