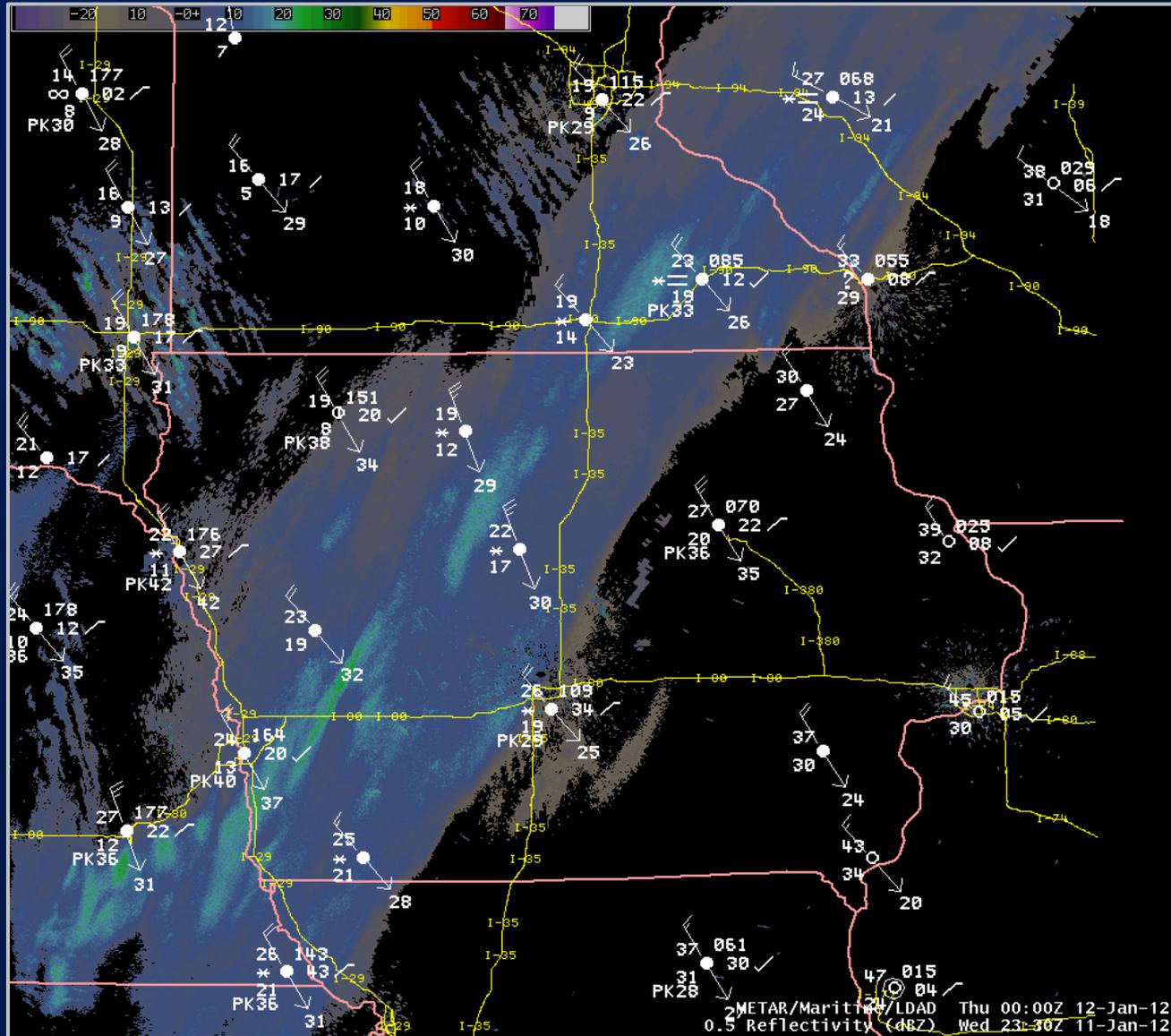


Jan 11 2012 Micro Climate Study

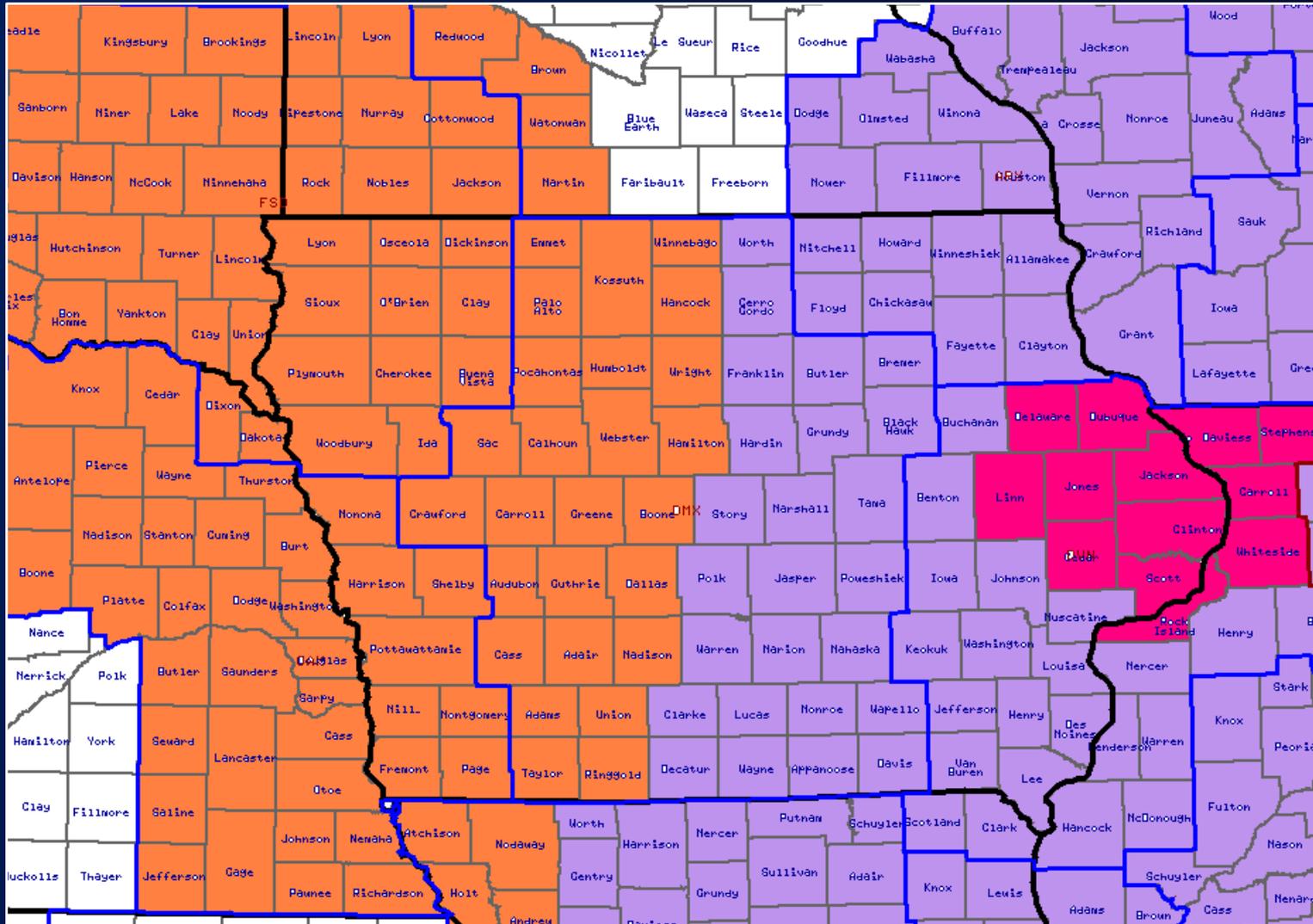
6hr Radar Loop



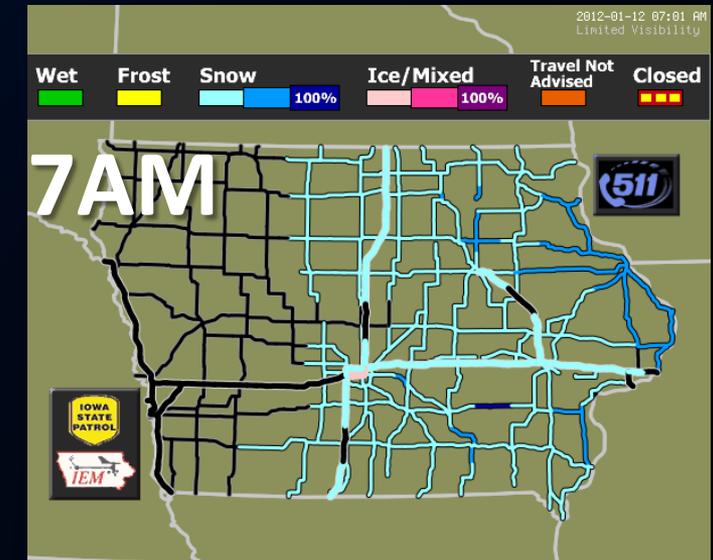
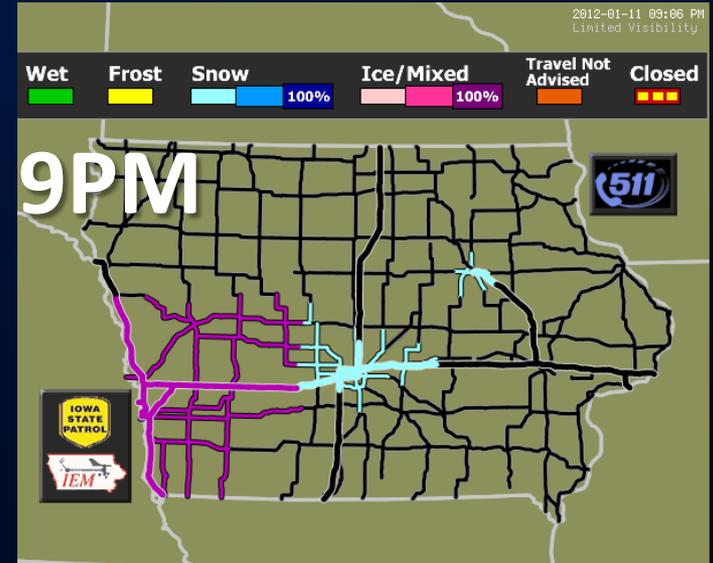
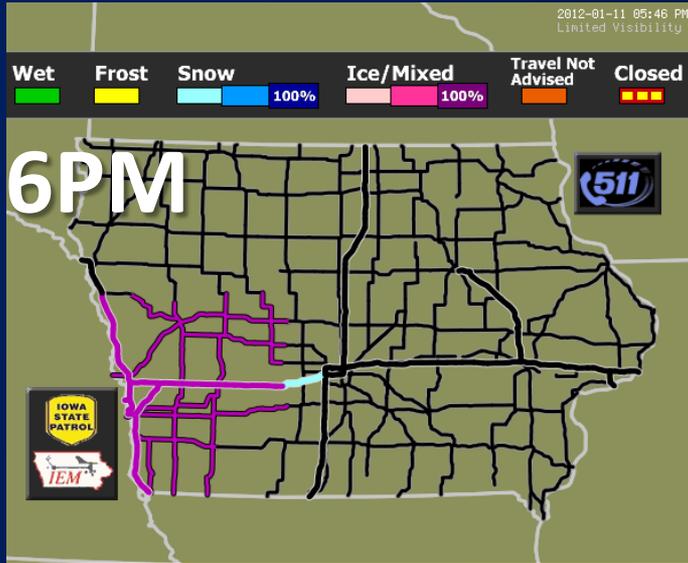
Products Issued

Wind Advisory

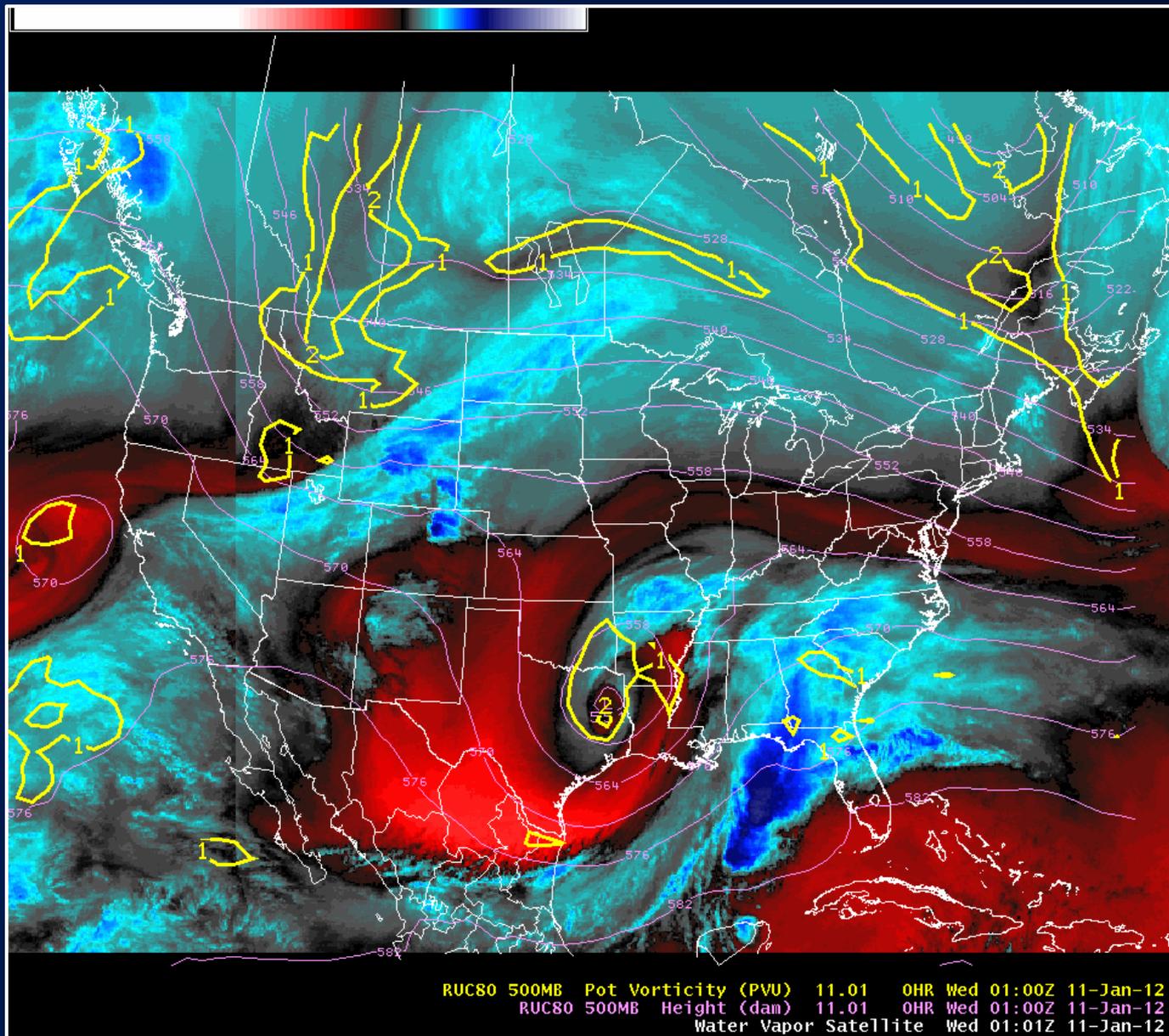
Winter Weather Advisory



Road Conditions

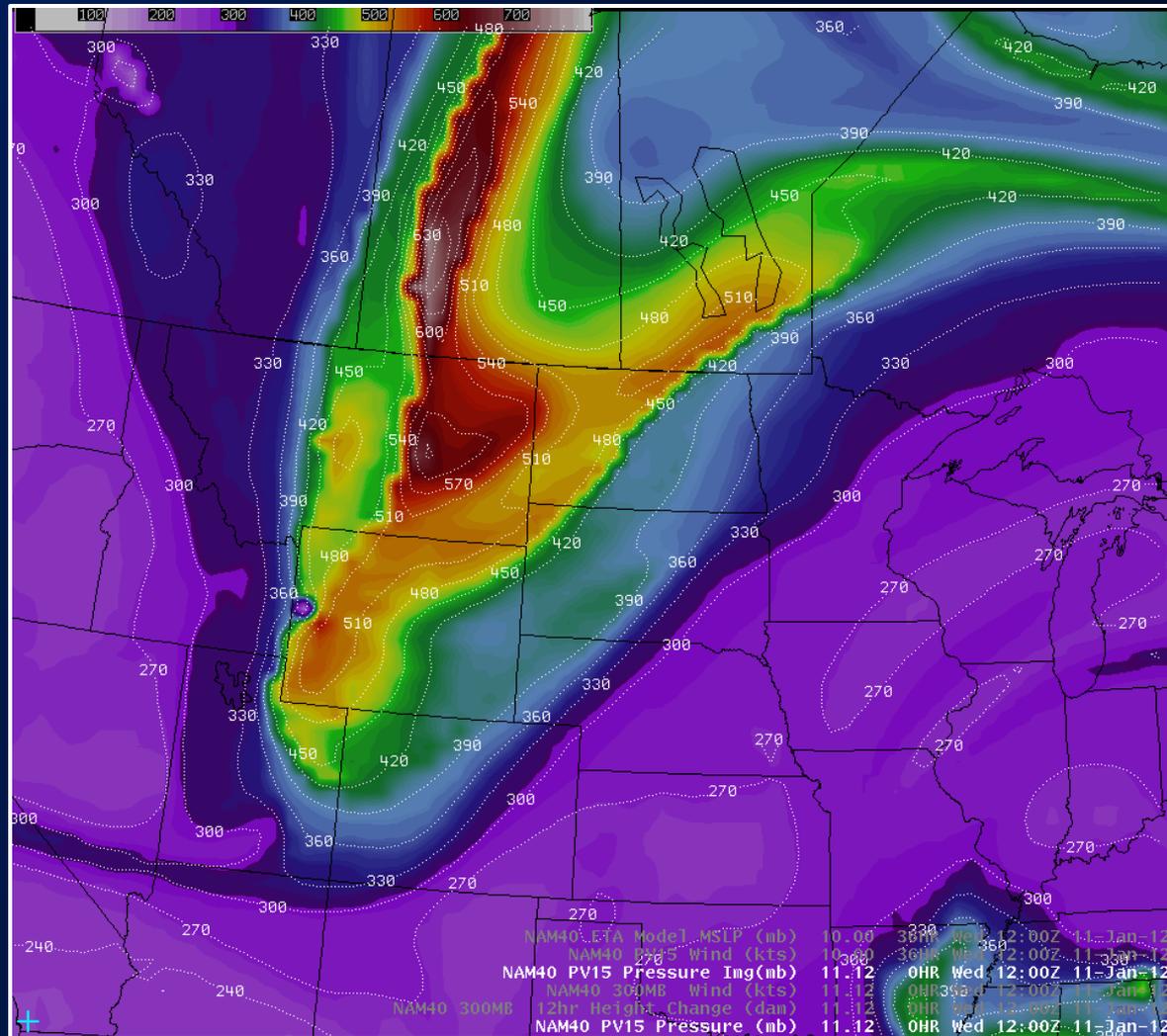


Water Vapor and PV



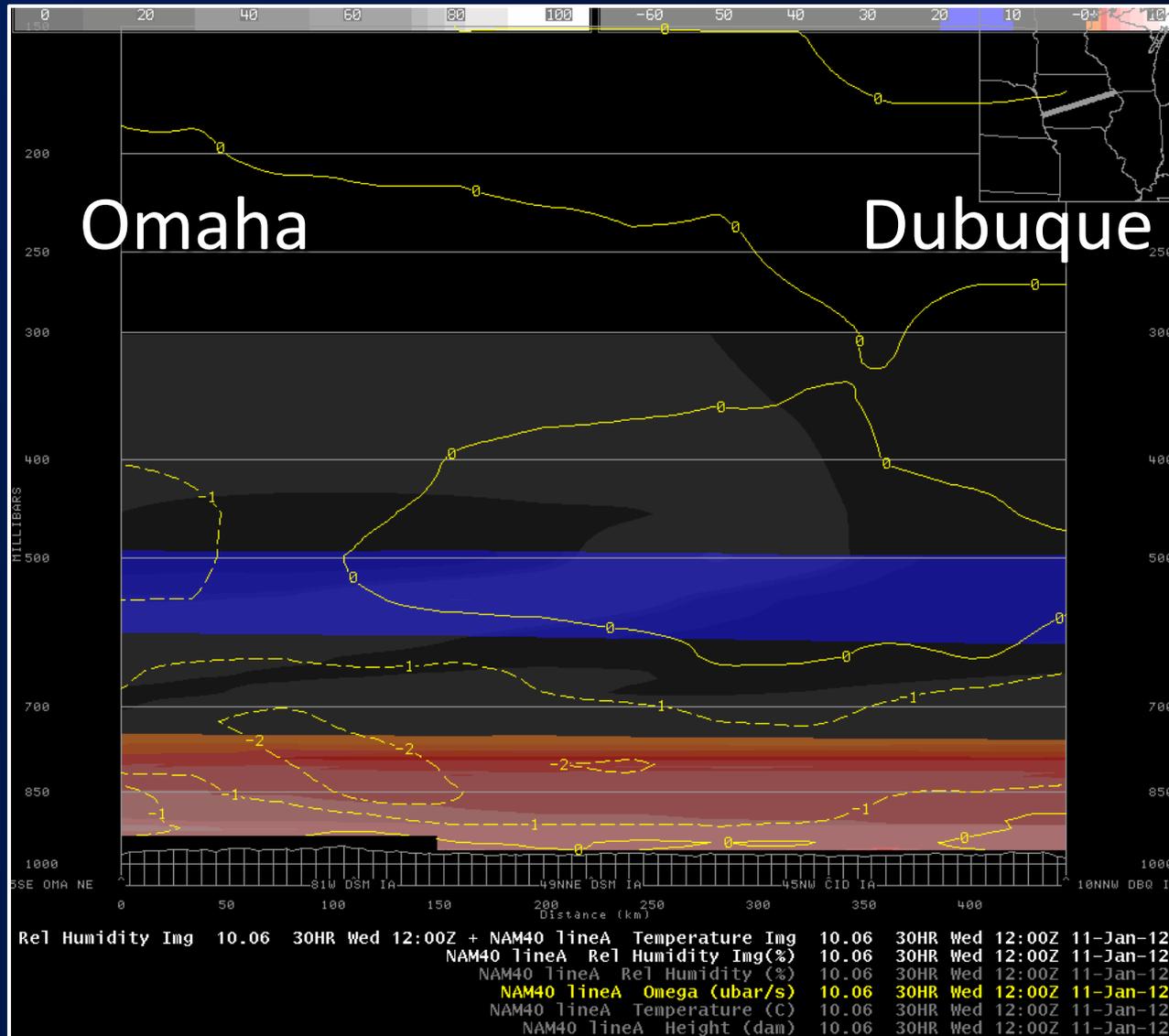
1.5 PV Loop

- ❄ Main PV lobe dives well west of Iowa
- What does this mean?



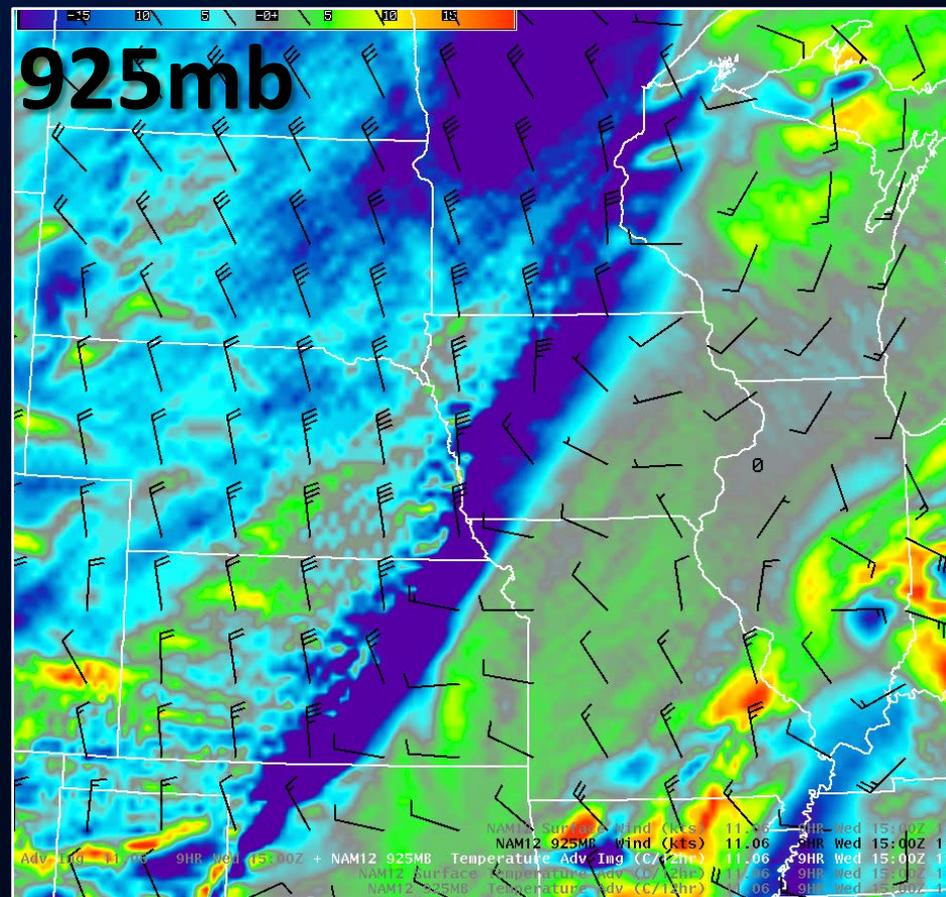
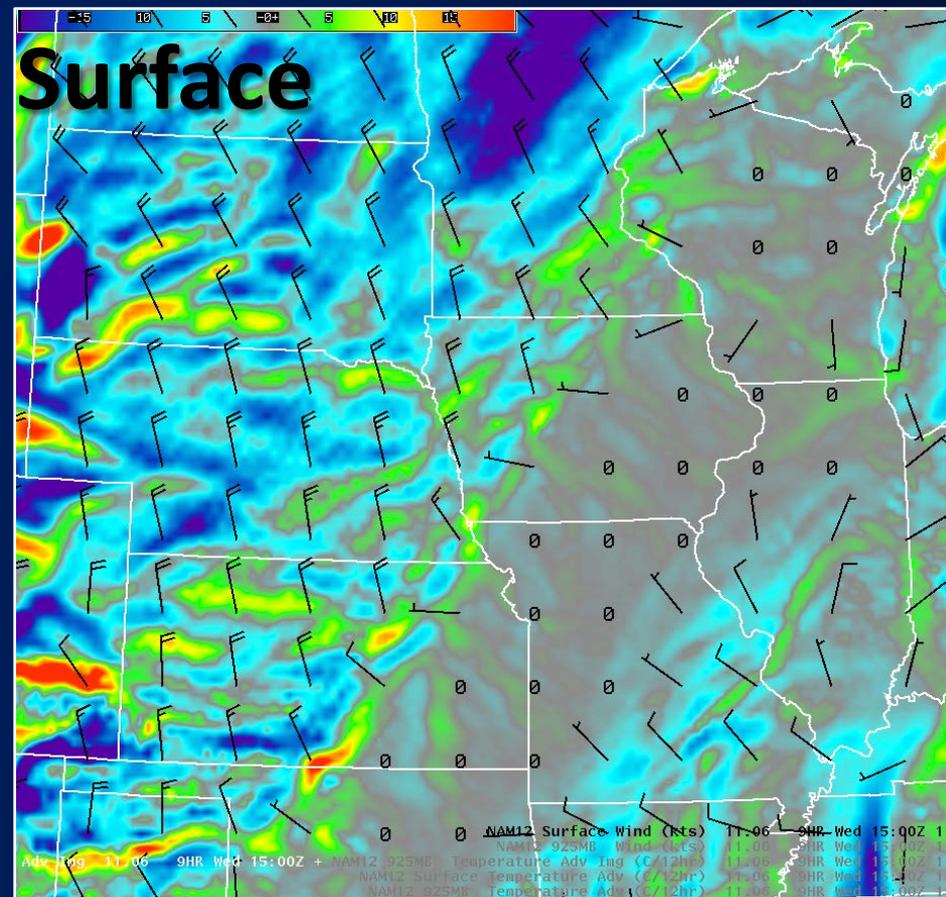
Omaha to Dubuque Cross Section

❄️ Weak lift (yellow) in the dendritic zone (blue shading)

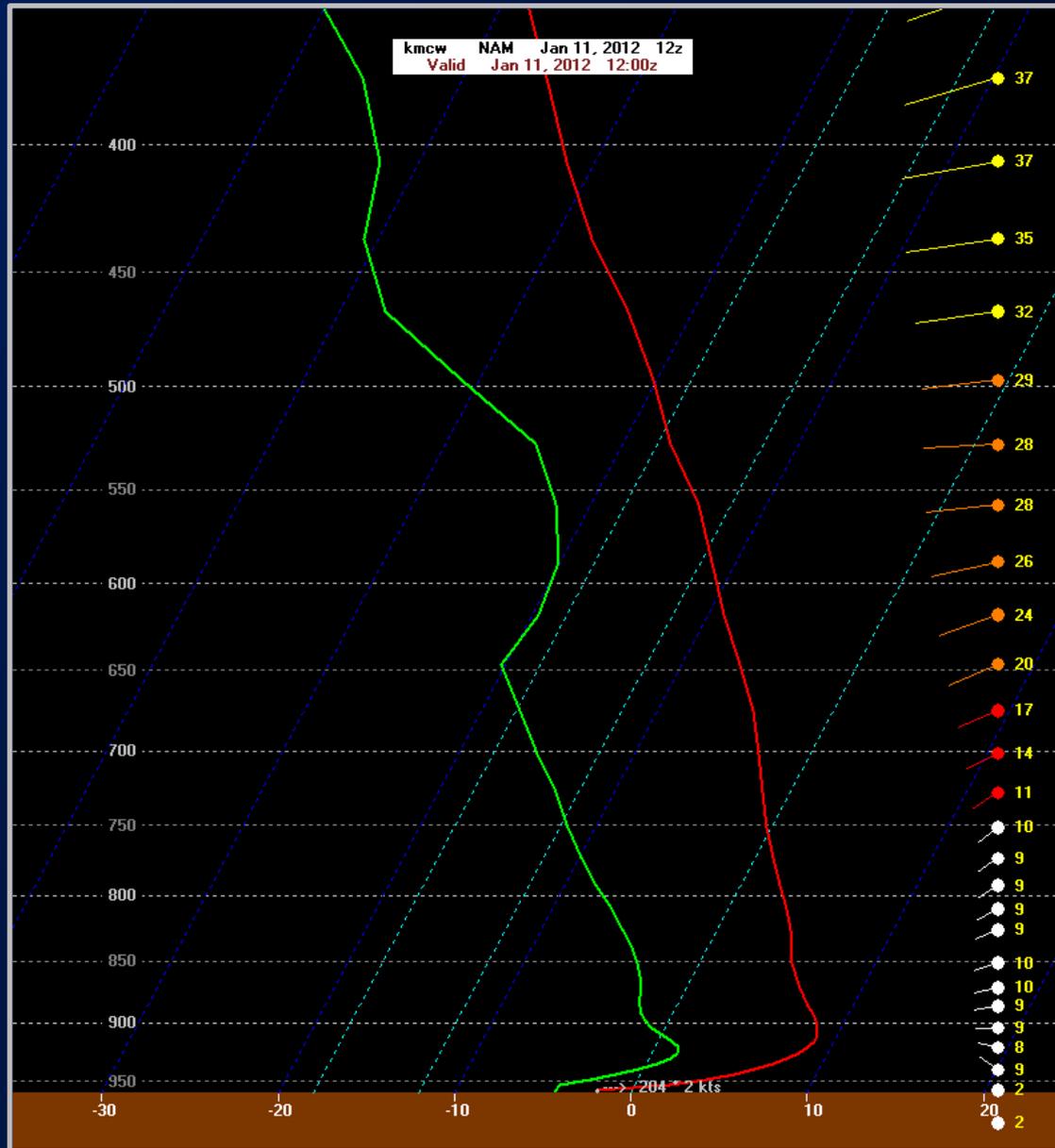


Differential Cold Air Advection

- ❄️ Surface CAA (left) and 925 CAA (right)
- ❄️ Stronger CAA at 925 would (did) destabilize the boundary layer

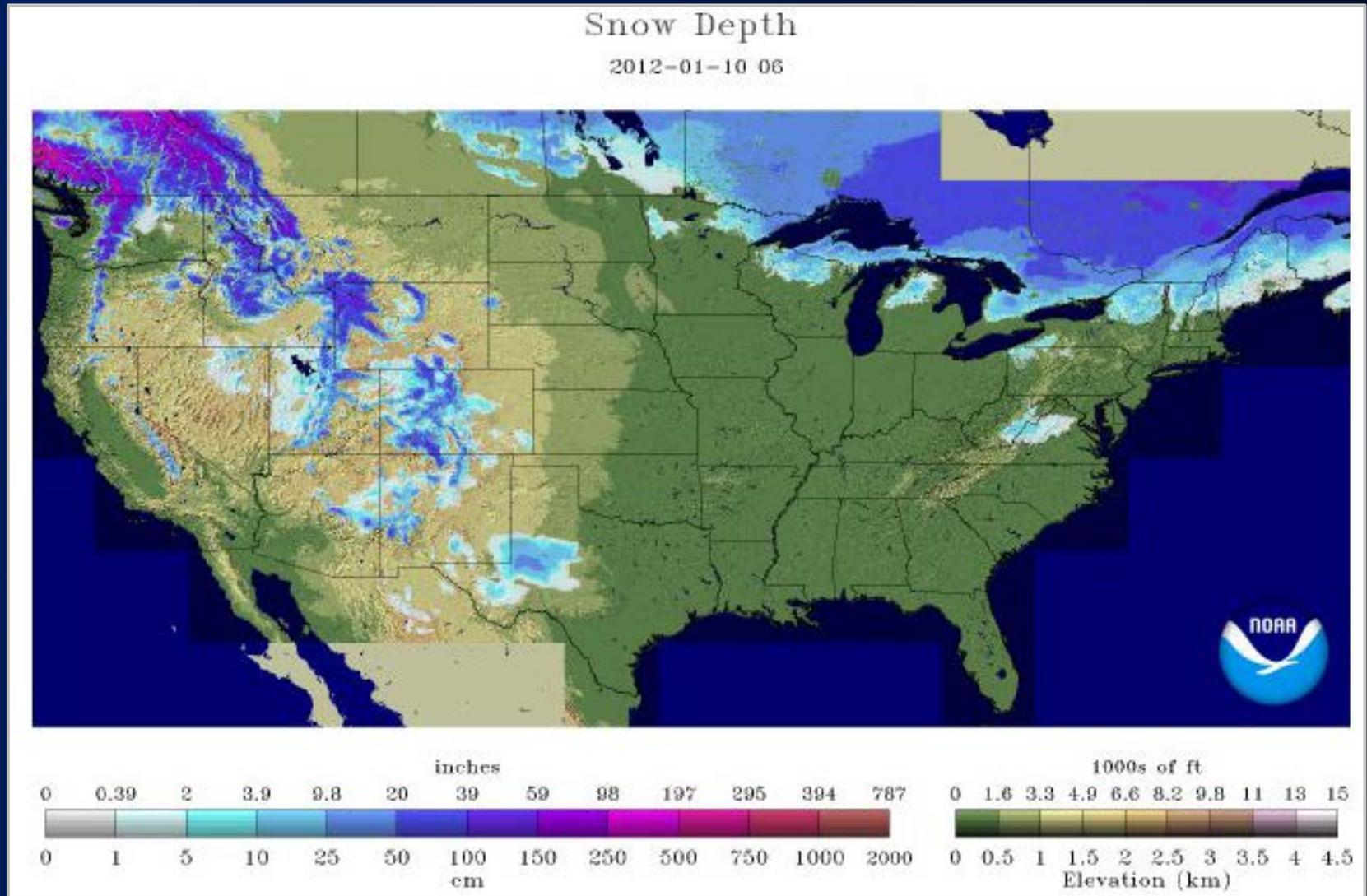


Jan 11 2012 24hr Sounding Loop



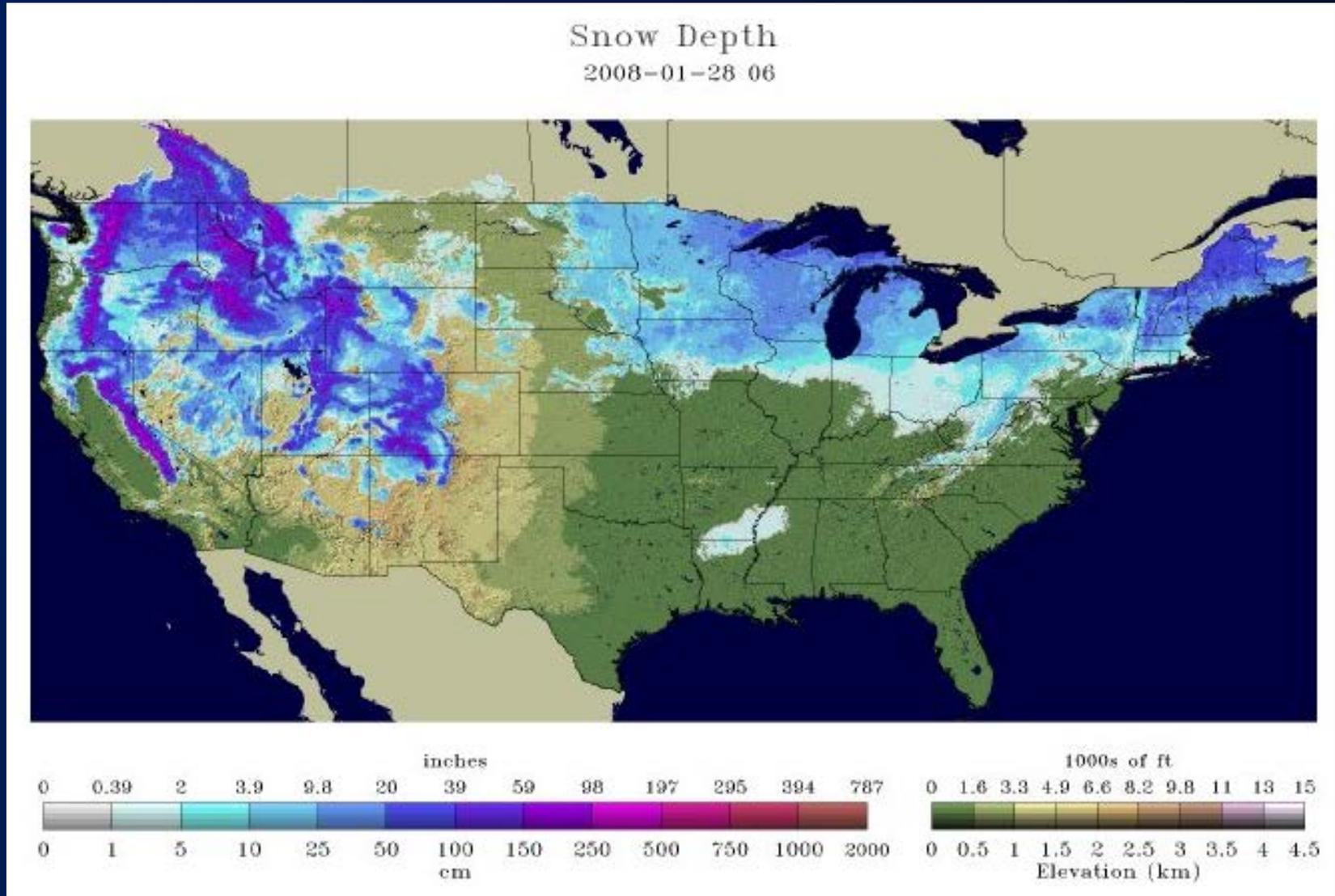
The Missing Link.!!!

❄️ Snowpack as of Jan 10 2012



Comparison to Actual Blizzard – Jan 29 2008

❄️ Snowpack as of Jan 28 2008



Jan 29 2008 Impacts

9 am CST



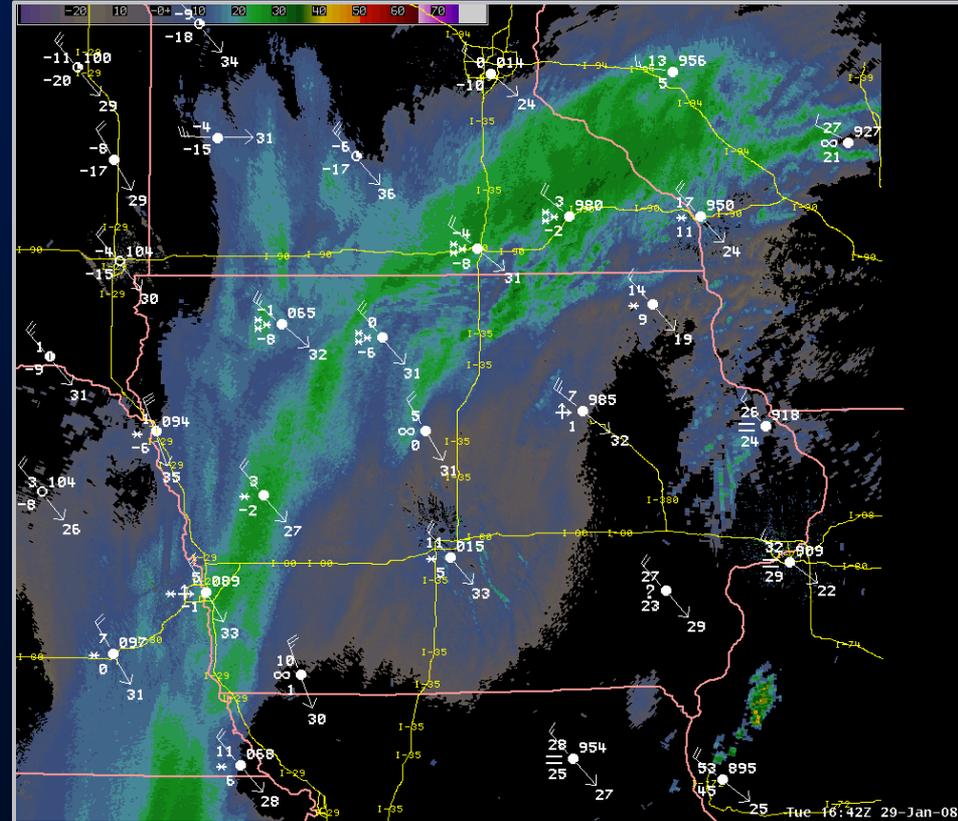
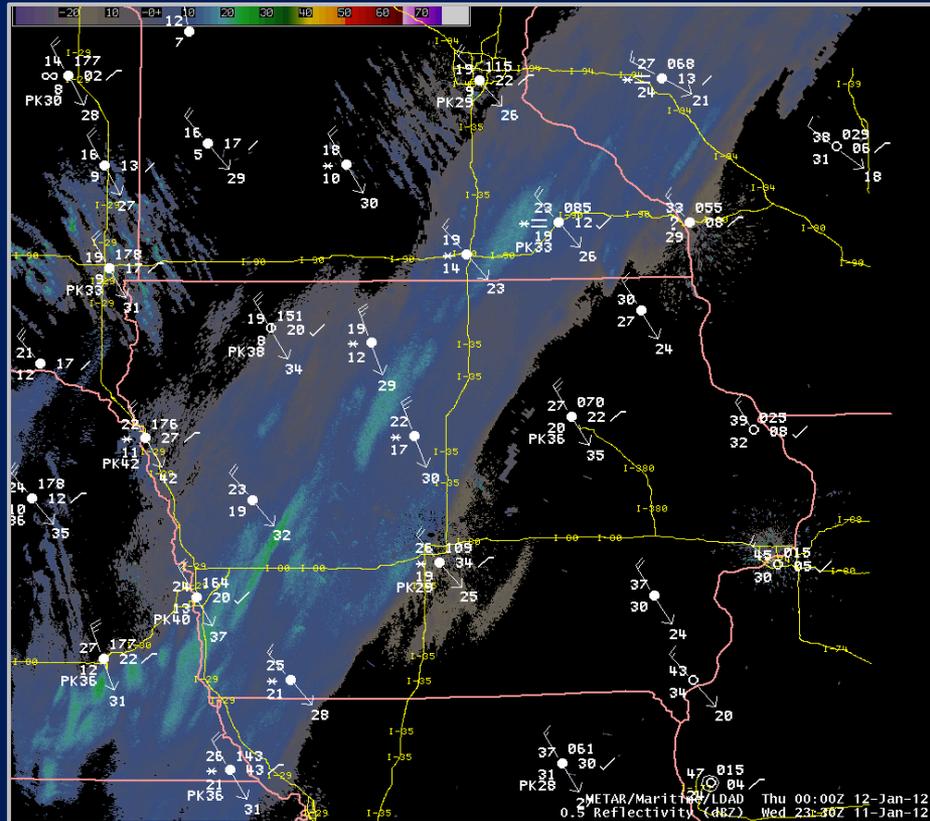
3 pm CST



Jan 11 2012

vs

Jan 29 2008



Don't miss this comparison loop!

Jan 11 2012

vs

Jan 29 2008

Mason City Observations

0.4 inches of snowfall

253pm	28°F	10mi	29mph	36mph	Cloudy
353pm	25°F	1.8mi	25mph	38mph	Snow
453pm	22°F	1.8mi	26mph	37mph	Snow
553pm	19°F	2.5mi	32mph	46mph	Snow
653pm	18°F	3.0mi	32mph	45mph	Snow
753pm	17°F	8.0mi	31mph	40mph	Snow
853pm	16°F	10mi	32mph	43mph	Cloudy

Missing inches of Snowfall

953am	2°F	0.2mi	25mph	36mph	Snow
1053am	-1°F	0.2mi	30mph	38mph	Snow
1153am	-2°F	0.2mi	32mph	45mph	Snow
1253pm	-2°F	0.2mi	31mph	42mph	Snow
153pm	-2°F	0.2mi	30mph	37mph	Snow
253pm	-3°F	0.2mi	36mph	46mph	Snow
353pm	-3°F	0.2mi	39mph	48mph	Snow

Conclusions

- ❄ Mid level forcing was enough to produce light snowfall across the CWA for both events
- ❄ Strong boundary layer winds and falling temperatures caused poor road conditions
- ❄ These low QPF events often go unrealized until its too late
- ❄ Jan 11 2012 had all the symptoms of a non-typical blizzard event, but the lack of snow cover was the deciding factor (opinion)