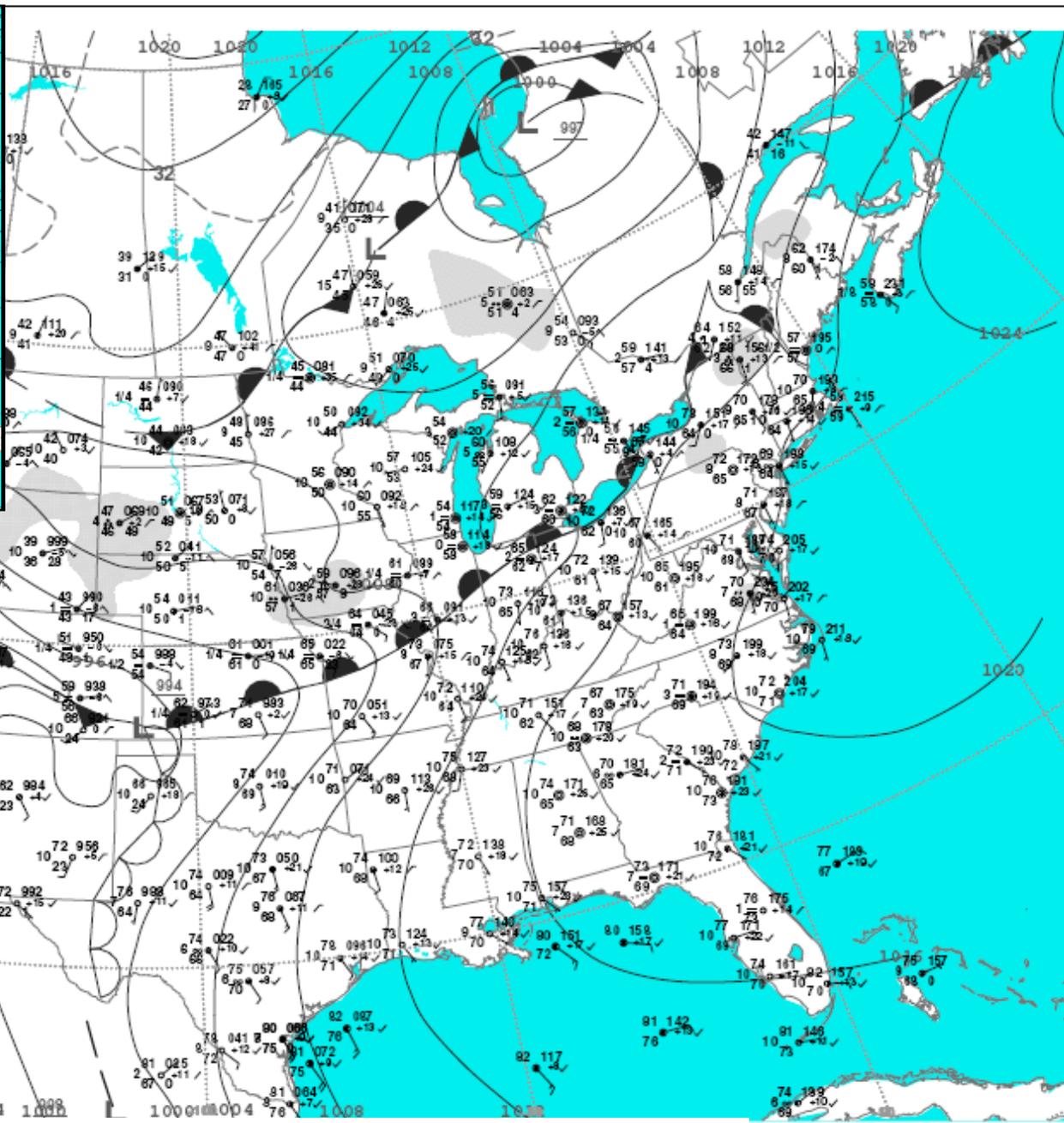
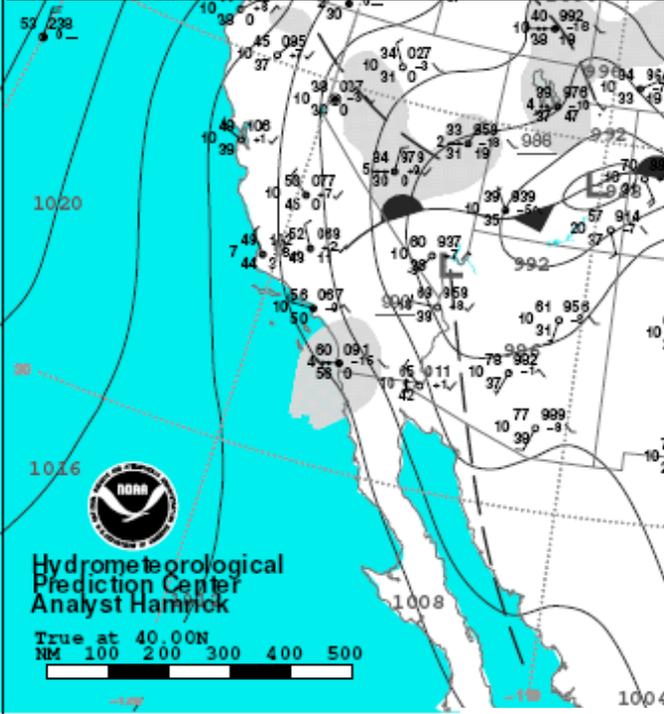
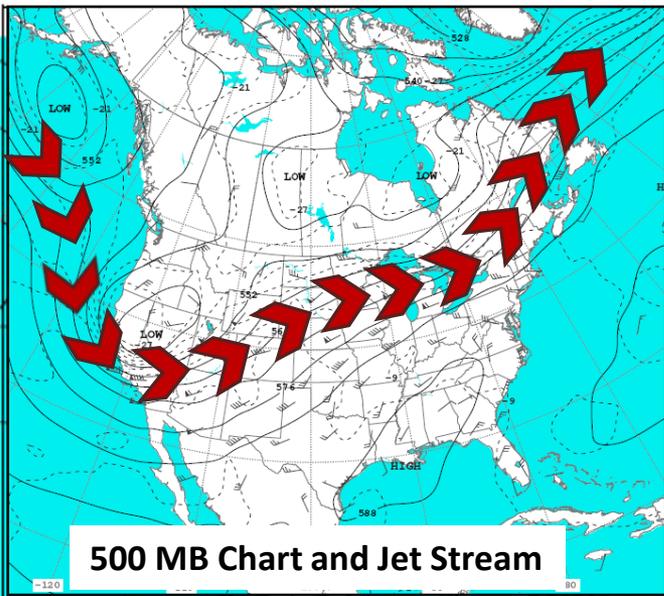


Southern Michigan Derecho

May 29, 2011

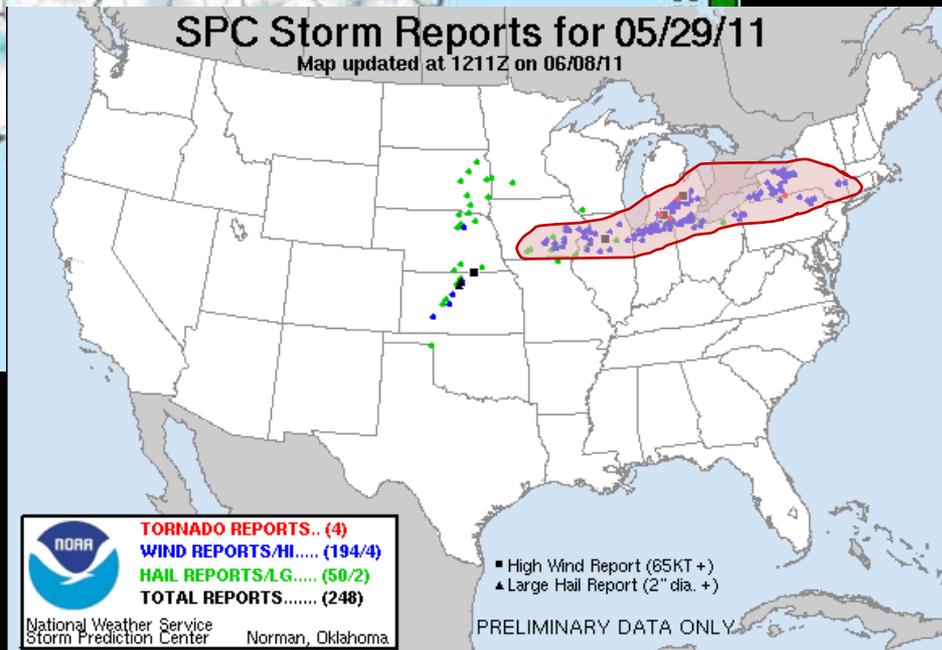
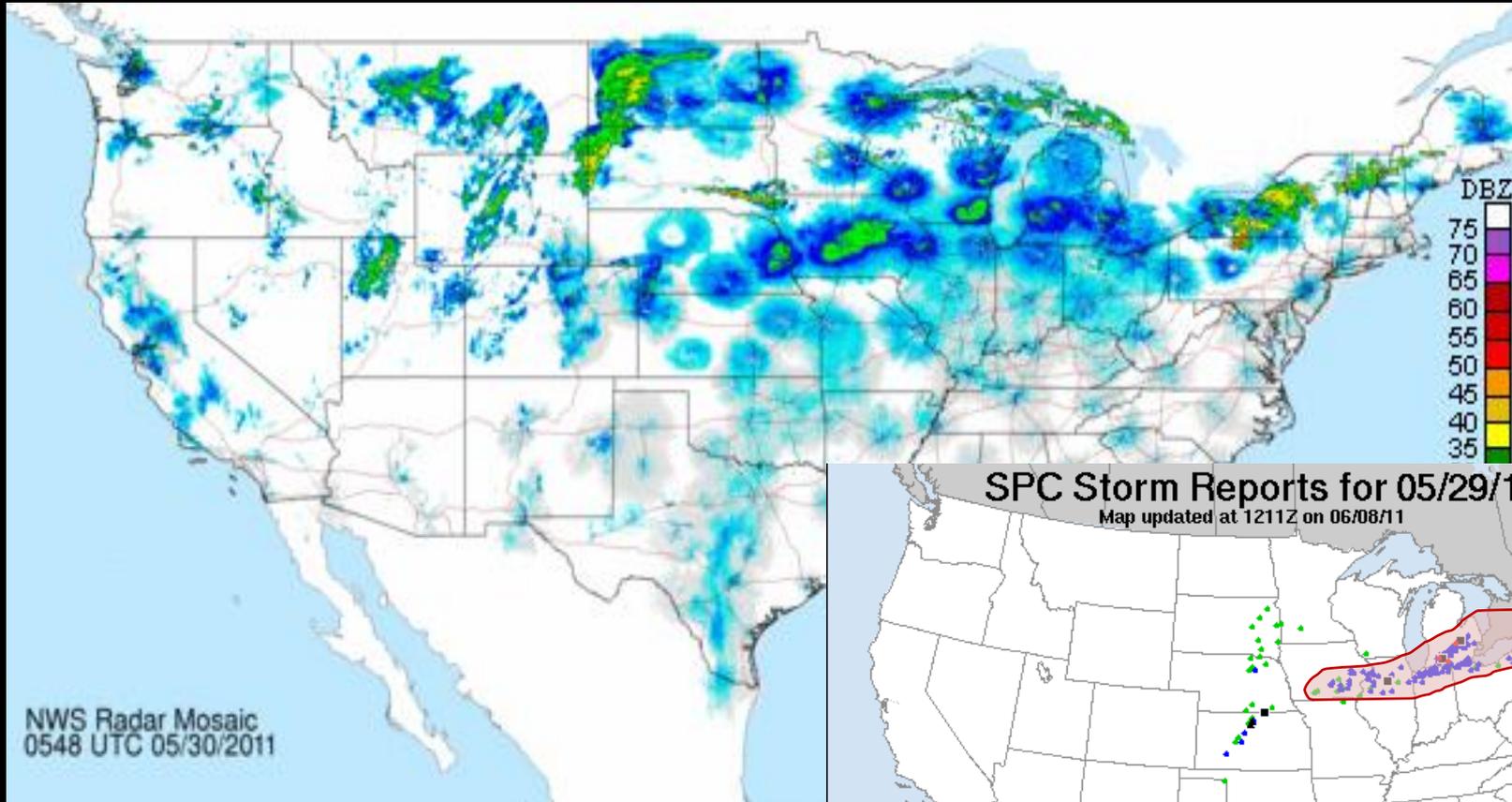





 Hydrometeorological
 Prediction Center
 Analyst Hammick
 True at 40.00N
 NM 100 200 300 400 500

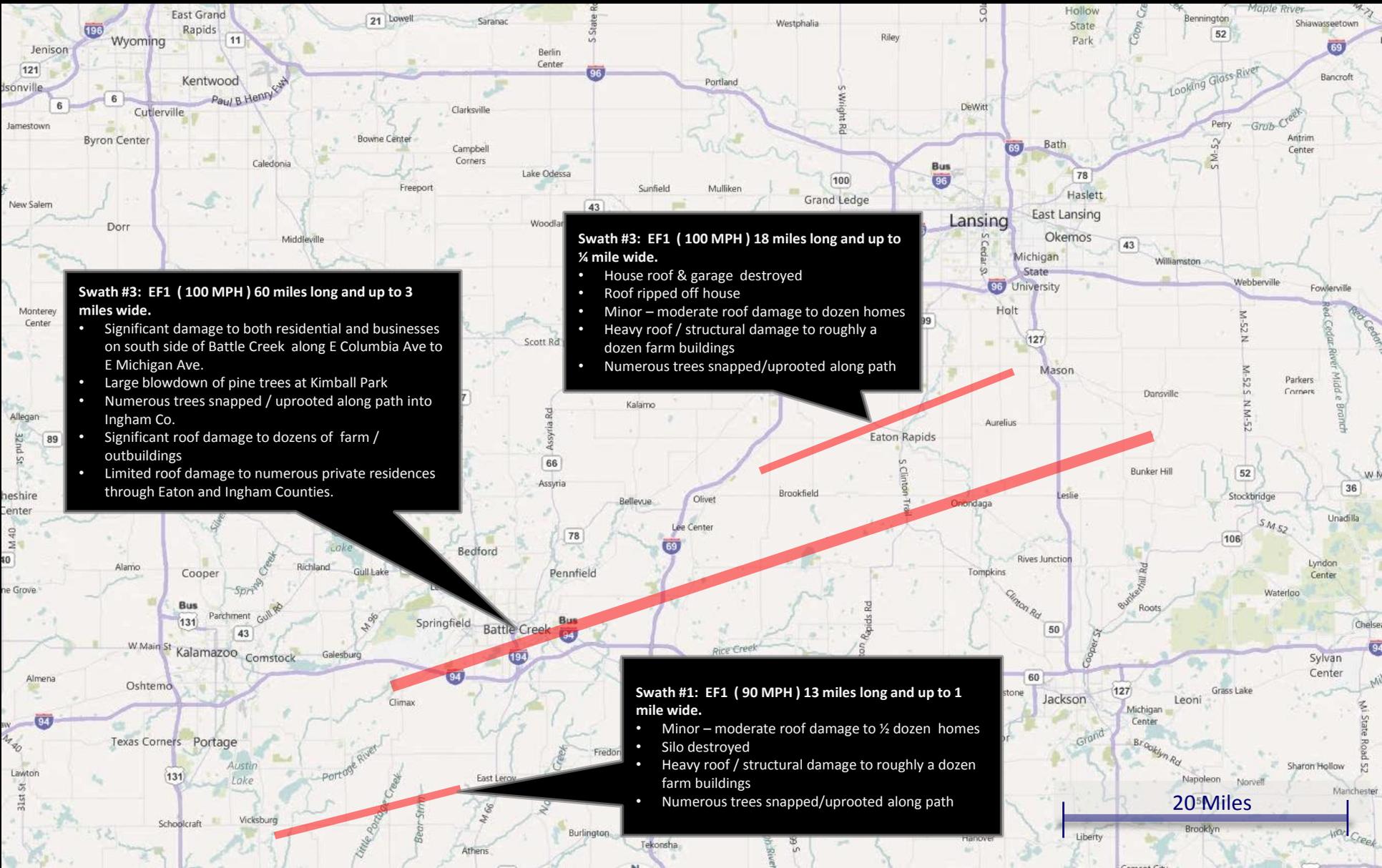
Surface Weather Map at 8:00 AM EDT May 29, 2011

Derecho Overview



EF-1 Severe Thunderstorm Tracks through Battle Creek and Kalamazoo, Calhoun, Eaton, and Ingham Counties

Sunday, May 29, 2011



Swath #3: EF1 (100 MPH) 60 miles long and up to 3 miles wide.

- Significant damage to both residential and businesses on south side of Battle Creek along E Columbia Ave to E Michigan Ave.
- Large blowdown of pine trees at Kimball Park
- Numerous trees snapped / uprooted along path into Ingham Co.
- Significant roof damage to dozens of farm / outbuildings
- Limited roof damage to numerous private residences through Eaton and Ingham Counties.

Swath #3: EF1 (100 MPH) 18 miles long and up to ¼ mile wide.

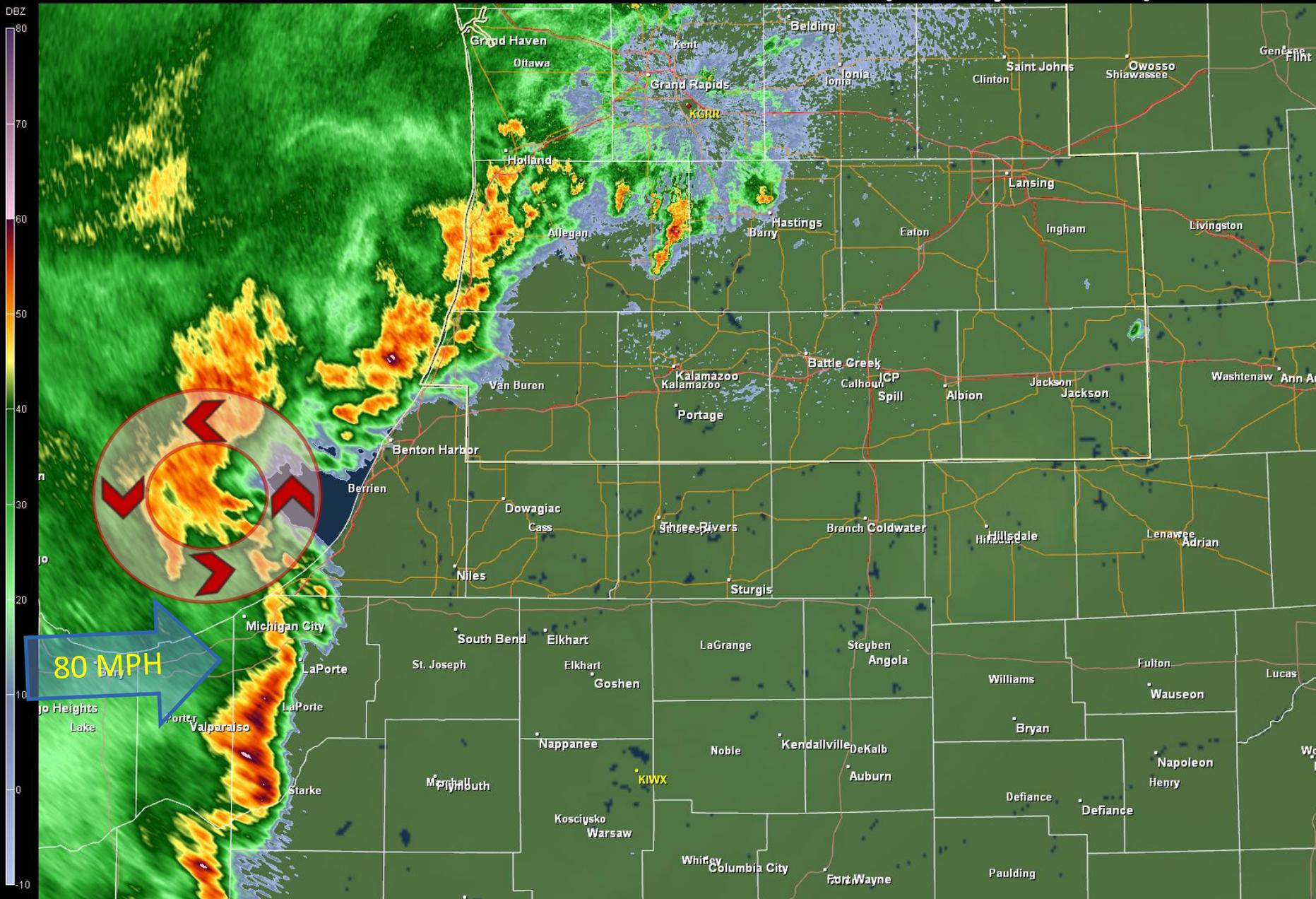
- House roof & garage destroyed
- Roof ripped off house
- Minor – moderate roof damage to dozen homes
- Heavy roof / structural damage to roughly a dozen farm buildings
- Numerous trees snapped/uprooted along path

Swath #1: EF1 (90 MPH) 13 miles long and up to 1 mile wide.

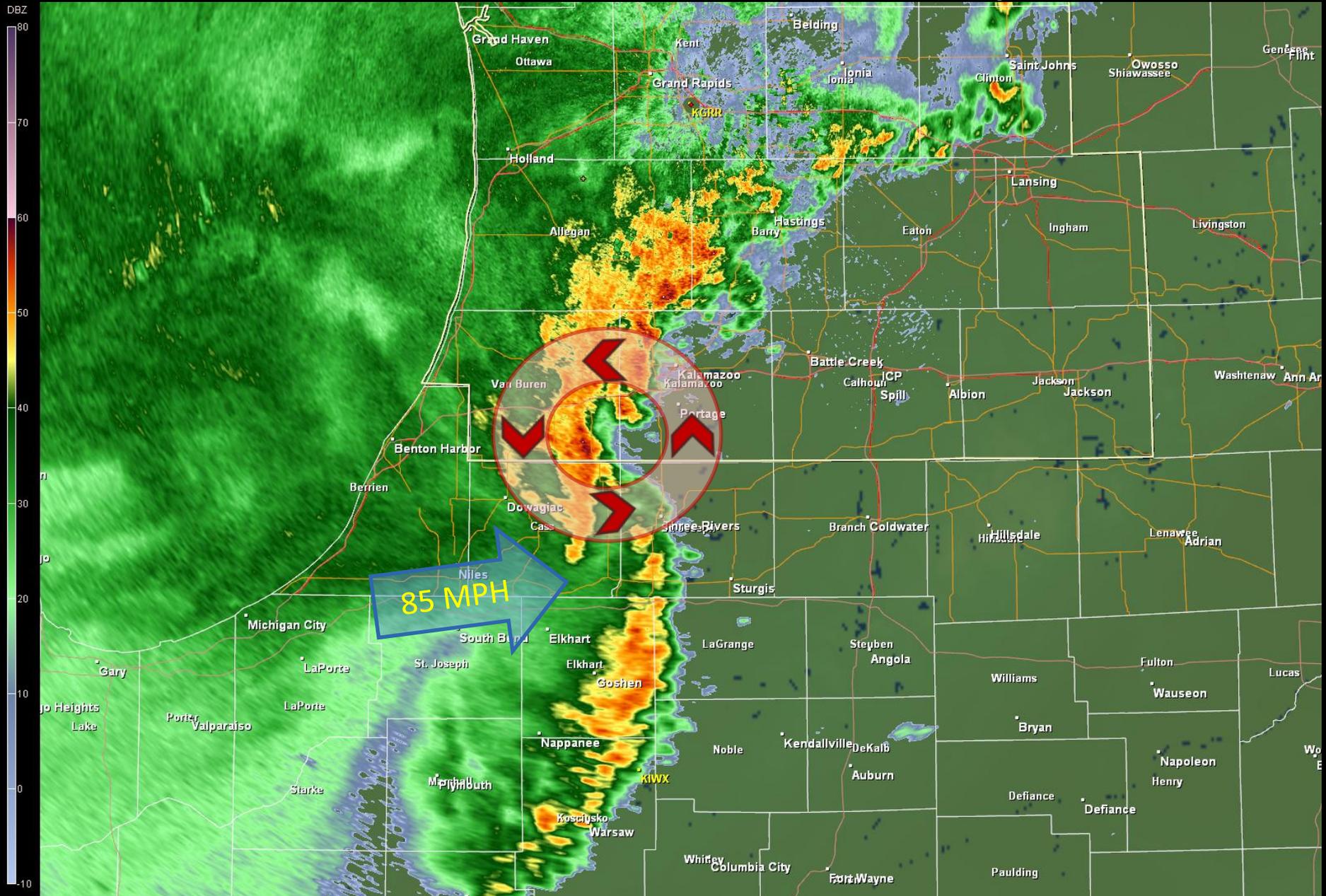
- Minor – moderate roof damage to ½ dozen homes
- Silo destroyed
- Heavy roof / structural damage to roughly a dozen farm buildings
- Numerous trees snapped/uprooted along path

20 Miles

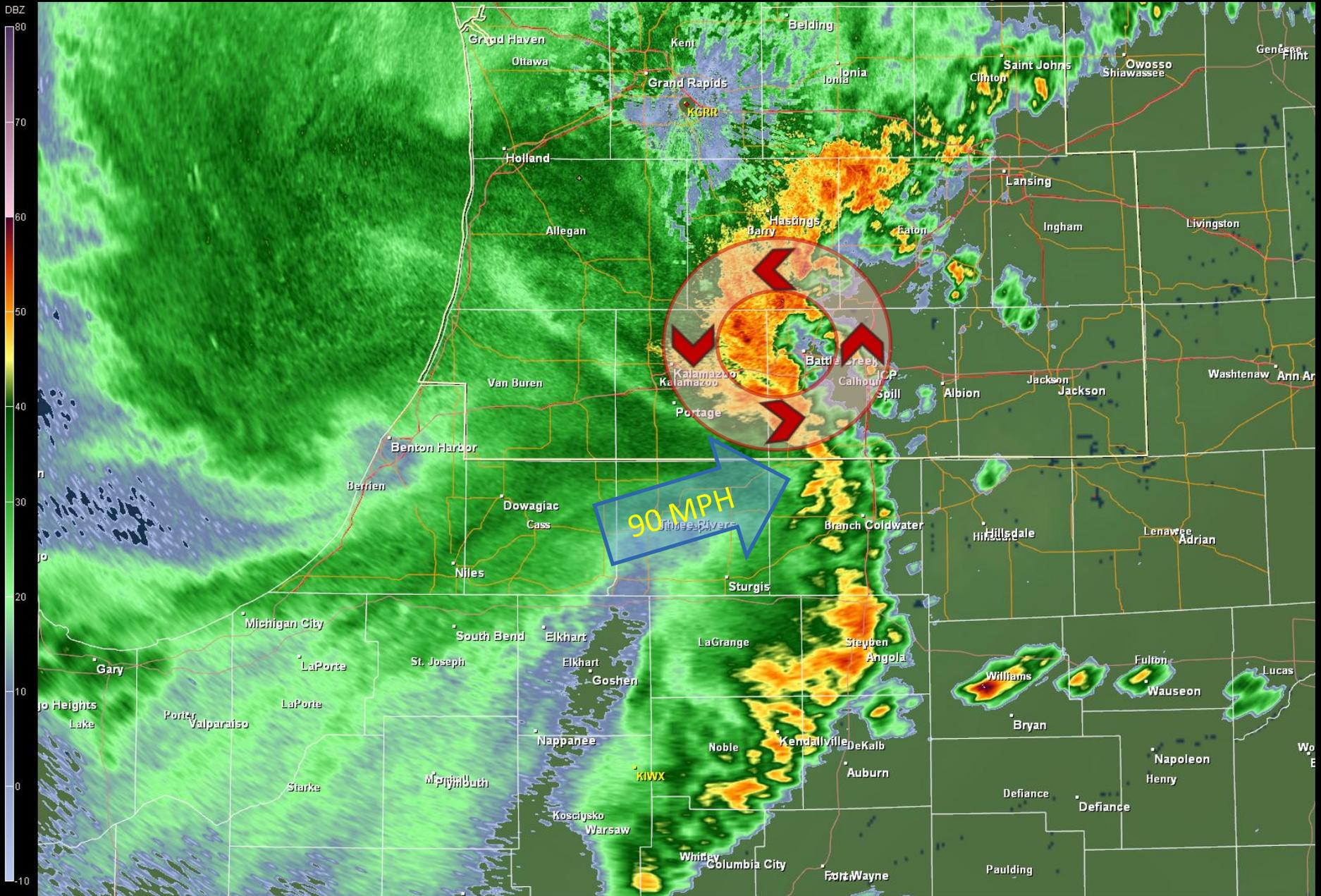
WFO-GRR Radar 3:00 PM (May 29th)



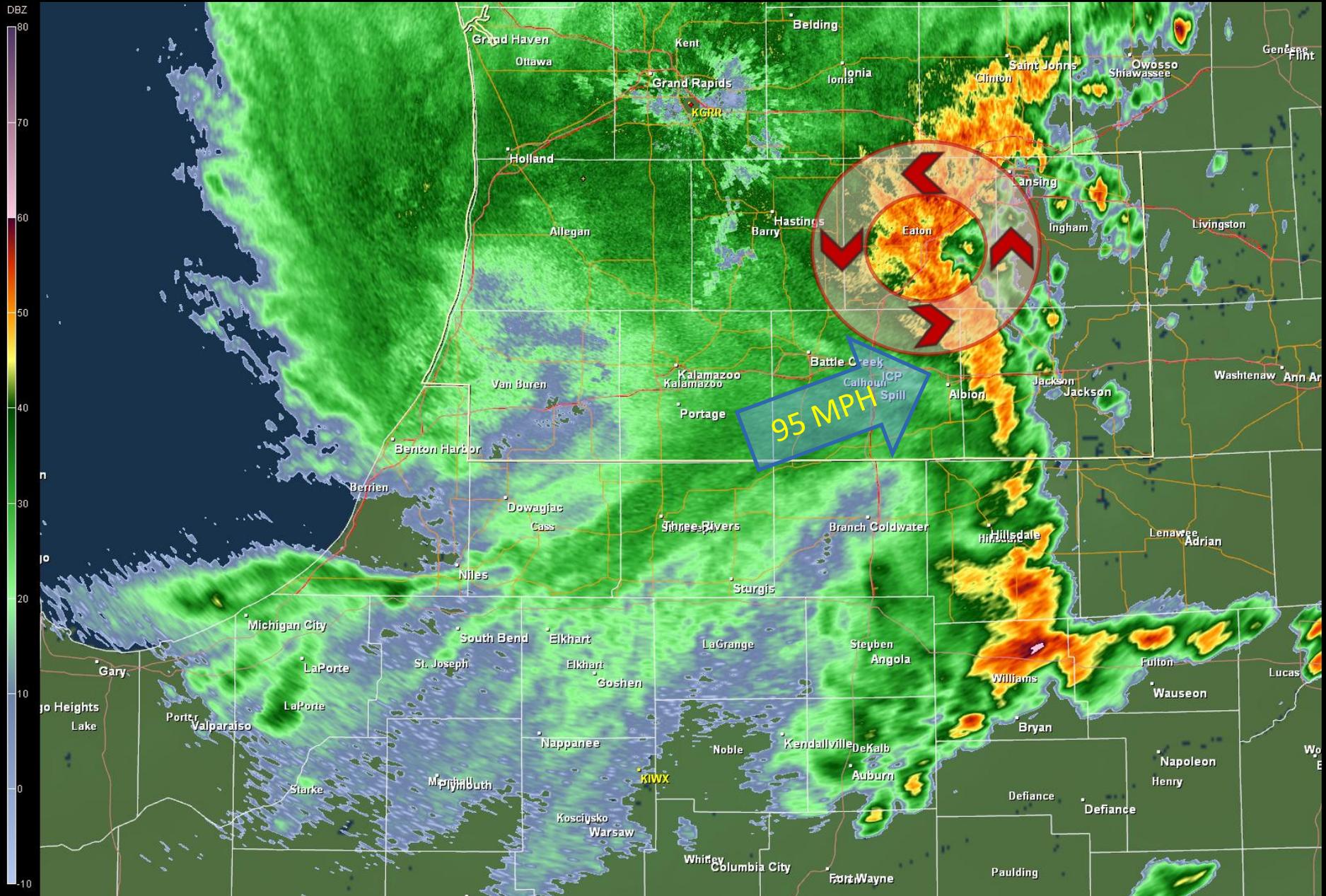
WFO-GRR Radar 4:00 PM (May 29th)



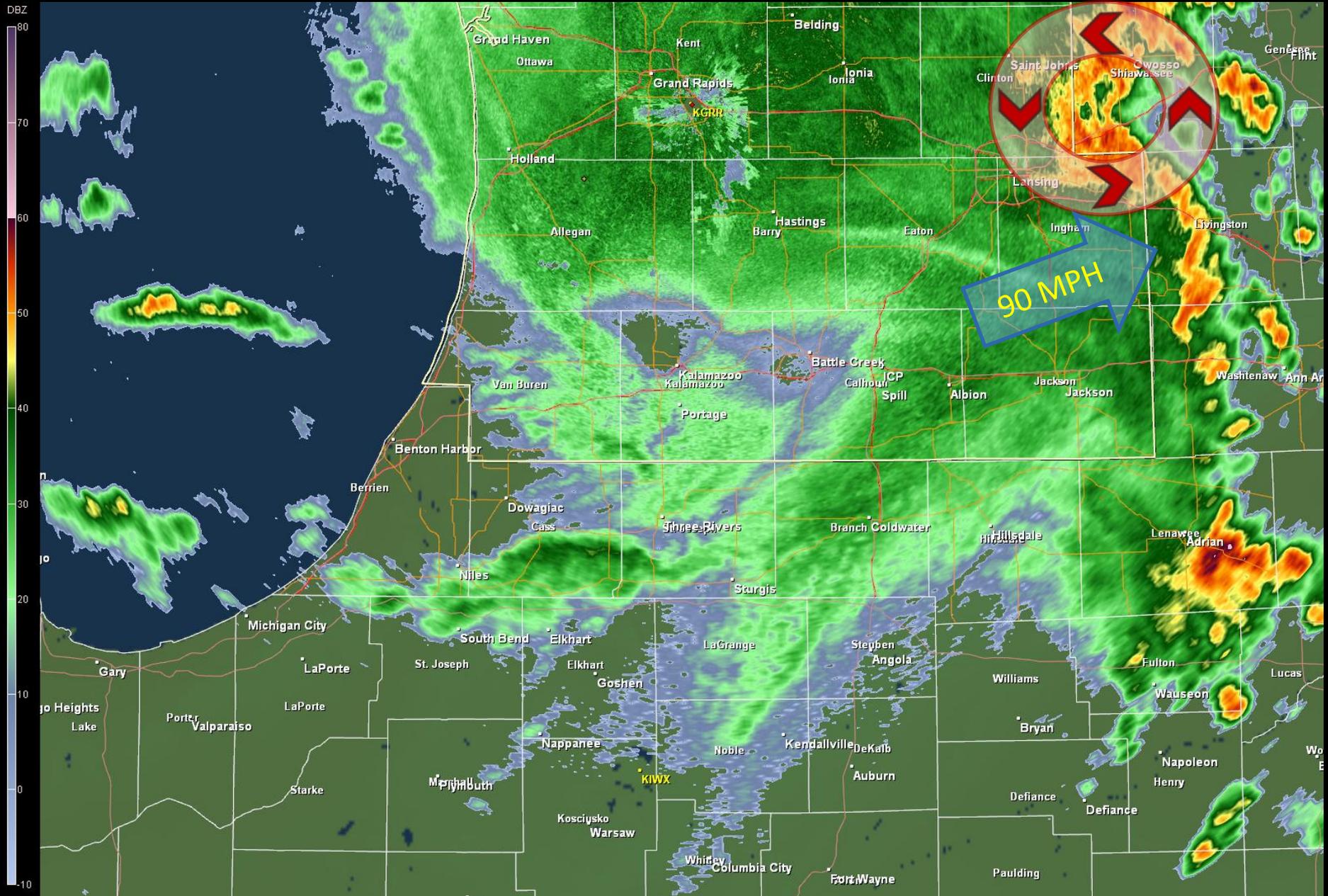
WFO-GRR Radar 4:30 PM (May 29th)



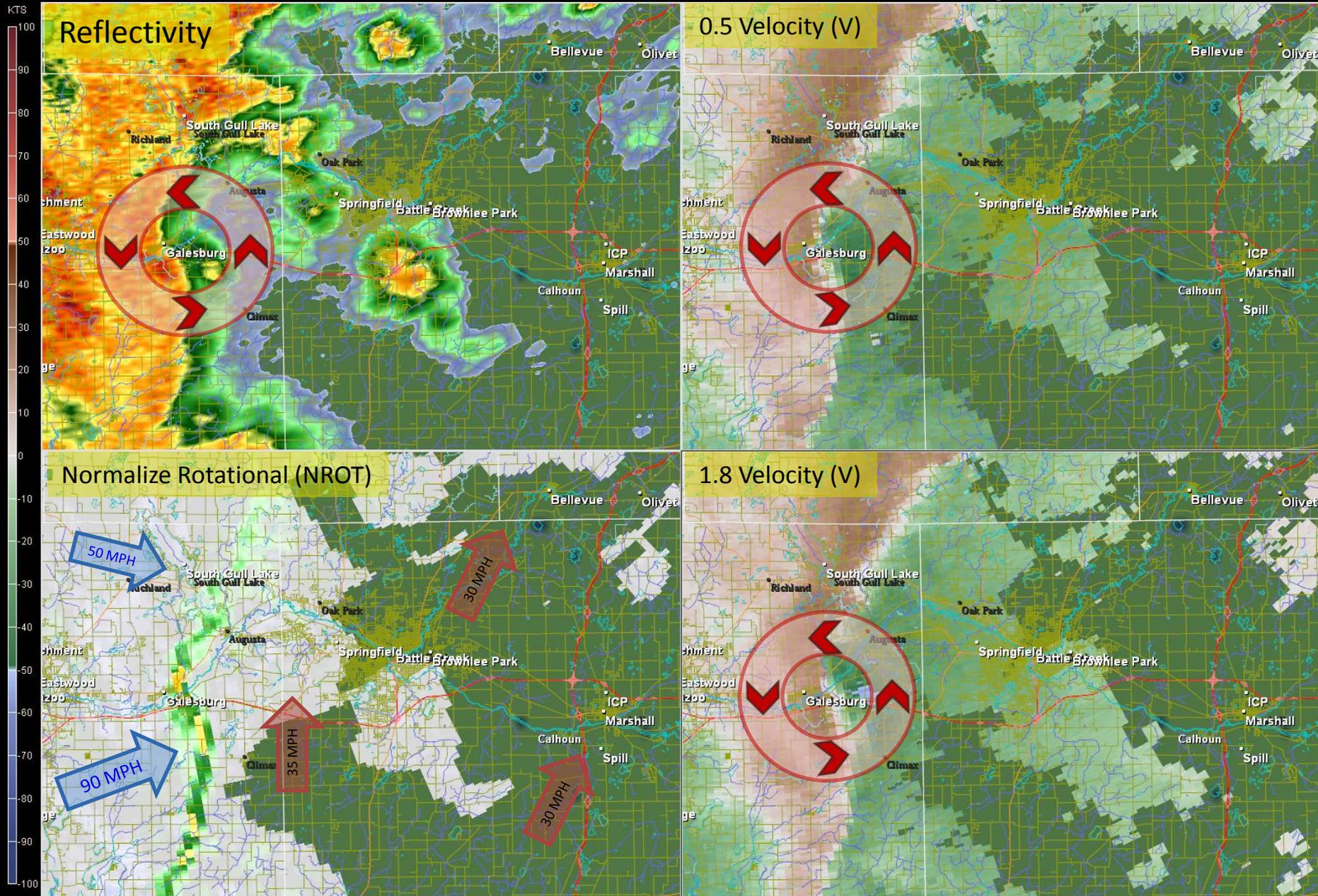
WFO-GRR Radar 5:00 PM (May 29th)



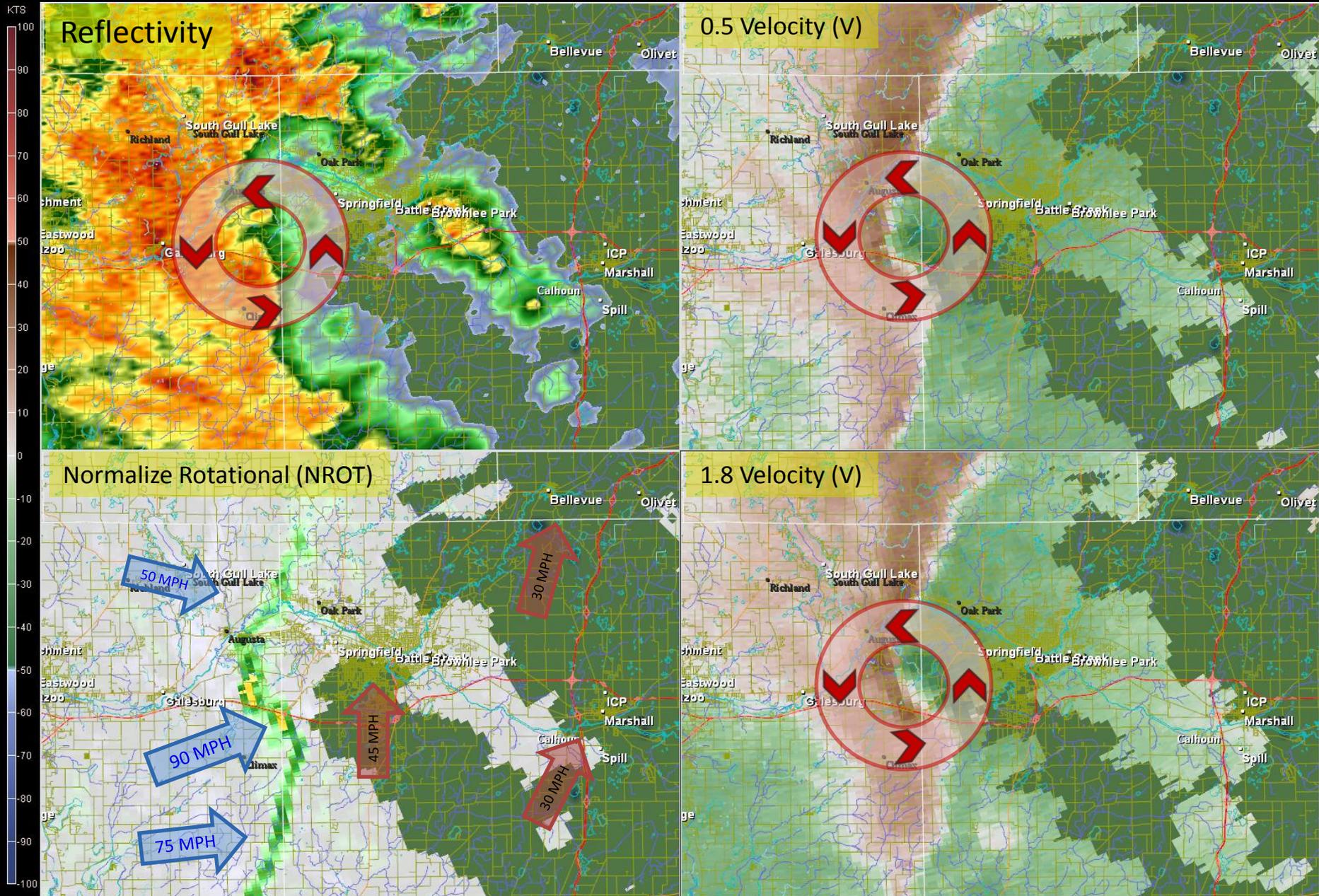
WFO-GRR Radar 5:30 PM (May 29th)



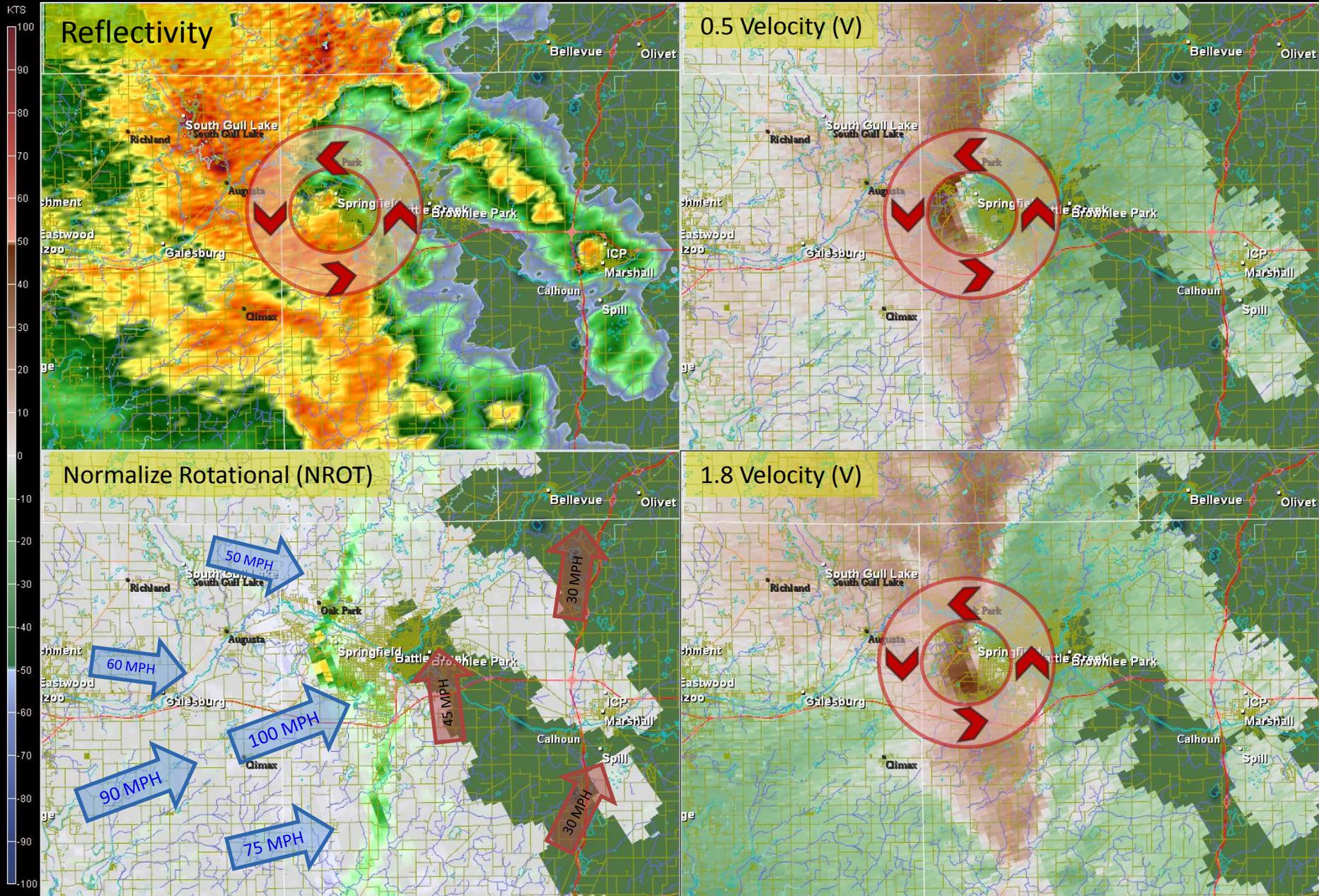
WFO-GRR Radar 4:22 PM (May 29th)



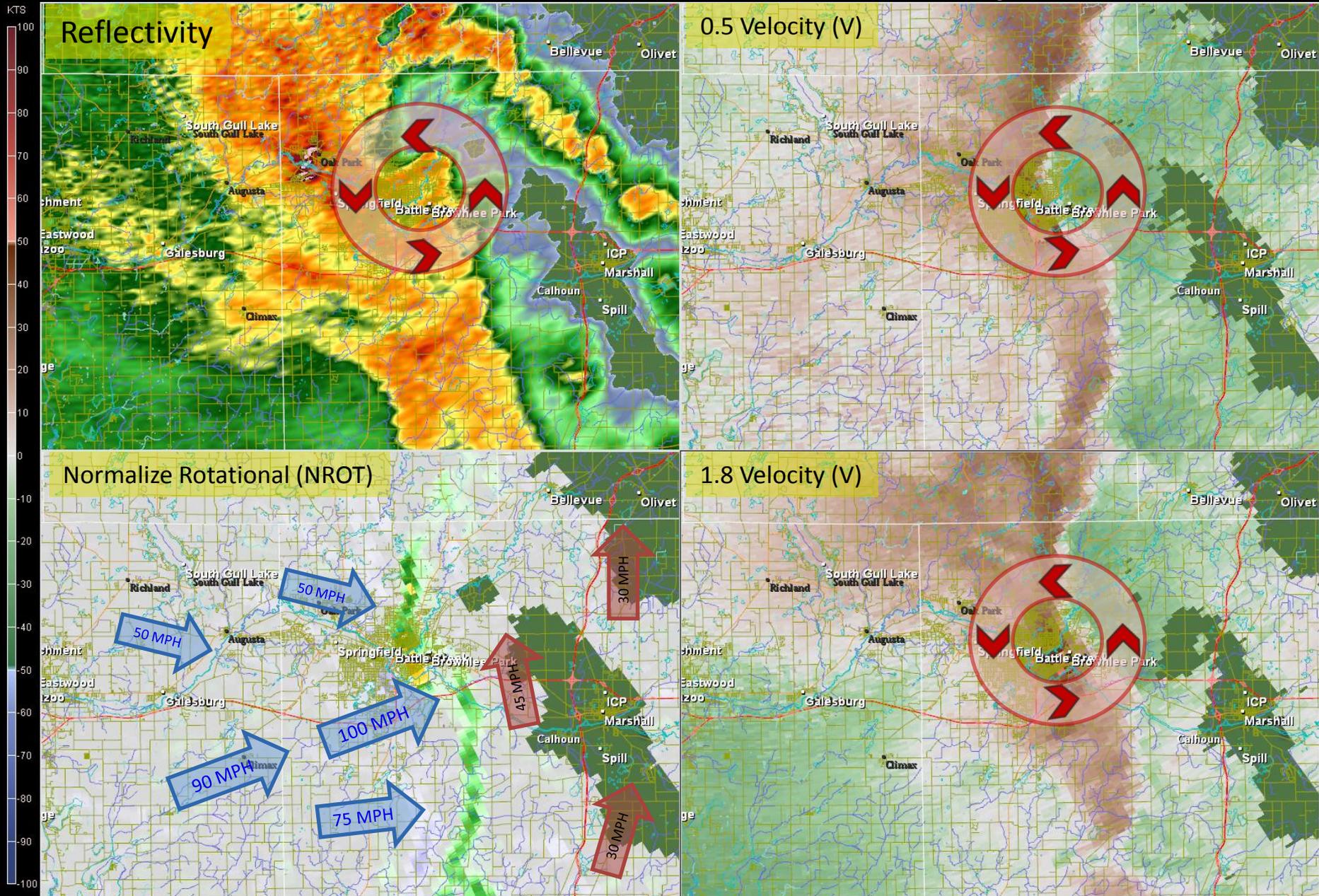
WFO-GRR Radar 4:26 PM (May 29th)



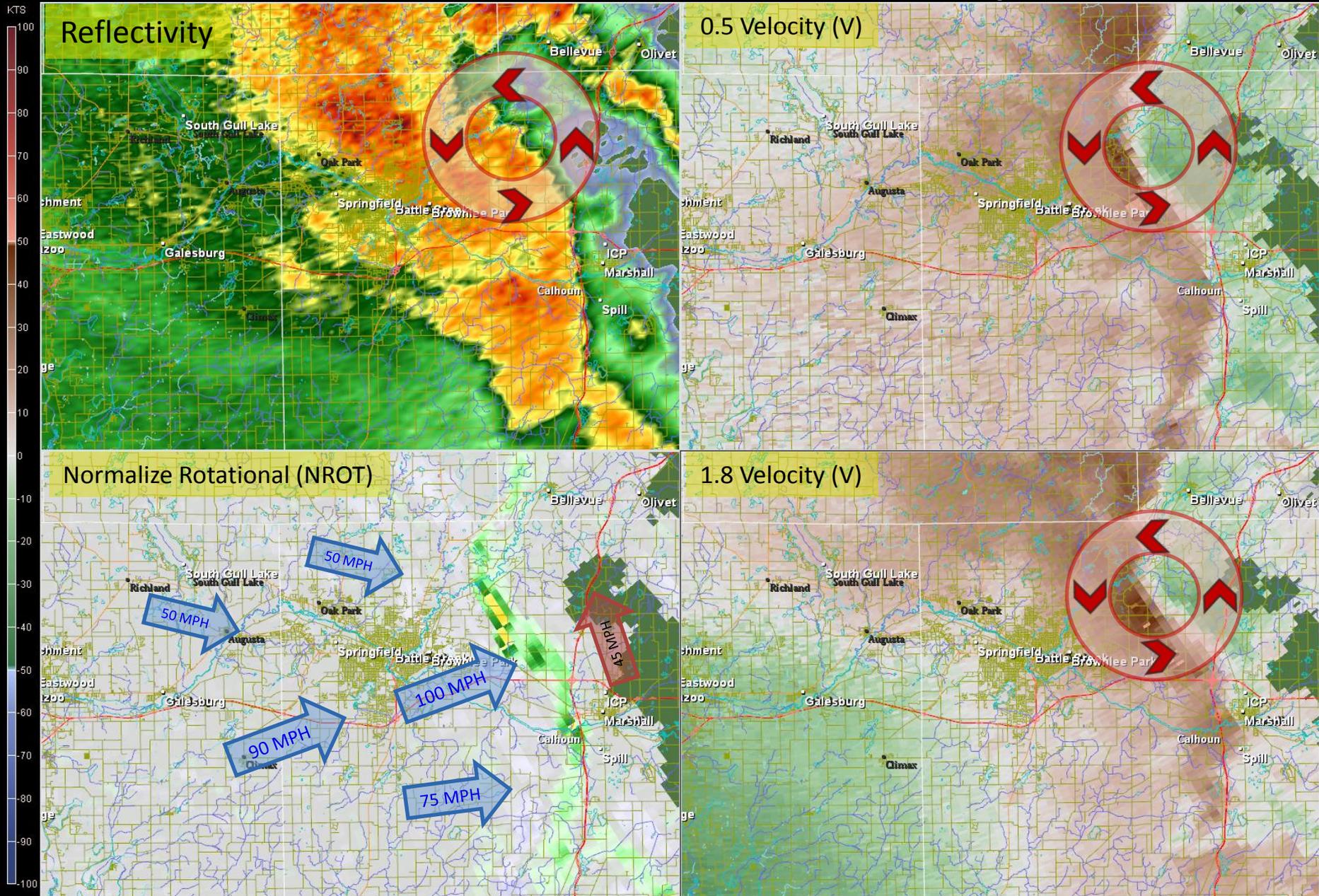
WFO-GRR Radar 4:30 PM (May 29th)



WFO-GRR Radar 4:35 PM (May 29th)



WFO-GRR Radar 4:40 PM (May 29th)



Summary

- Observed wind damage was associated with a mature Derecho occurring in association with a long-lived quasi-linear convective system (QLCS).
- The QLCS developed over eastern Nebraska north of a warm front roughly 14 hours before striking Battle Creek.
- The system had developed a meso-low pressure system and deep rear inflow jet that helped the damaging winds persist for hundreds of miles.
- Within the meso-low, smaller convective scale mesocyclones repeatedly developed and dissipated
- These mesocyclones produced 100 mph wind gusts over narrow but relatively long tracks ranging from 10 to 50+ miles each.
- The EF1 wind damage in Battle Creek was the result of one of the larger mesocyclones.

