

Parkersburg, IA EF5 Tornado



Courtesy Rod Donavon

May 25, 2008



Courtesy Rod Donavon

Jeff Johnson, Warning Coordination
Meteorologist, WFO Des Moines, IA

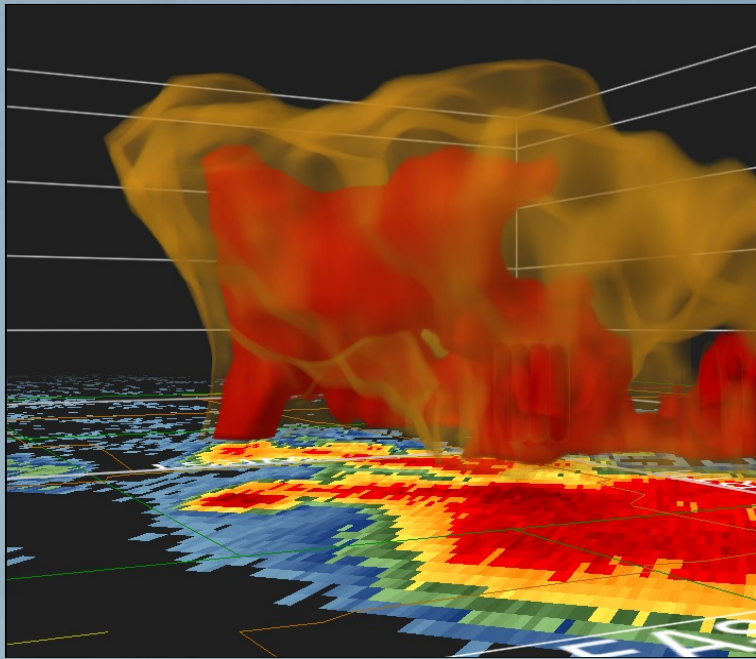
Karl Jungbluth, Science and Operations
Officer, WFO Des Moines, IA



*National Weather Service
Des Moines, IA*

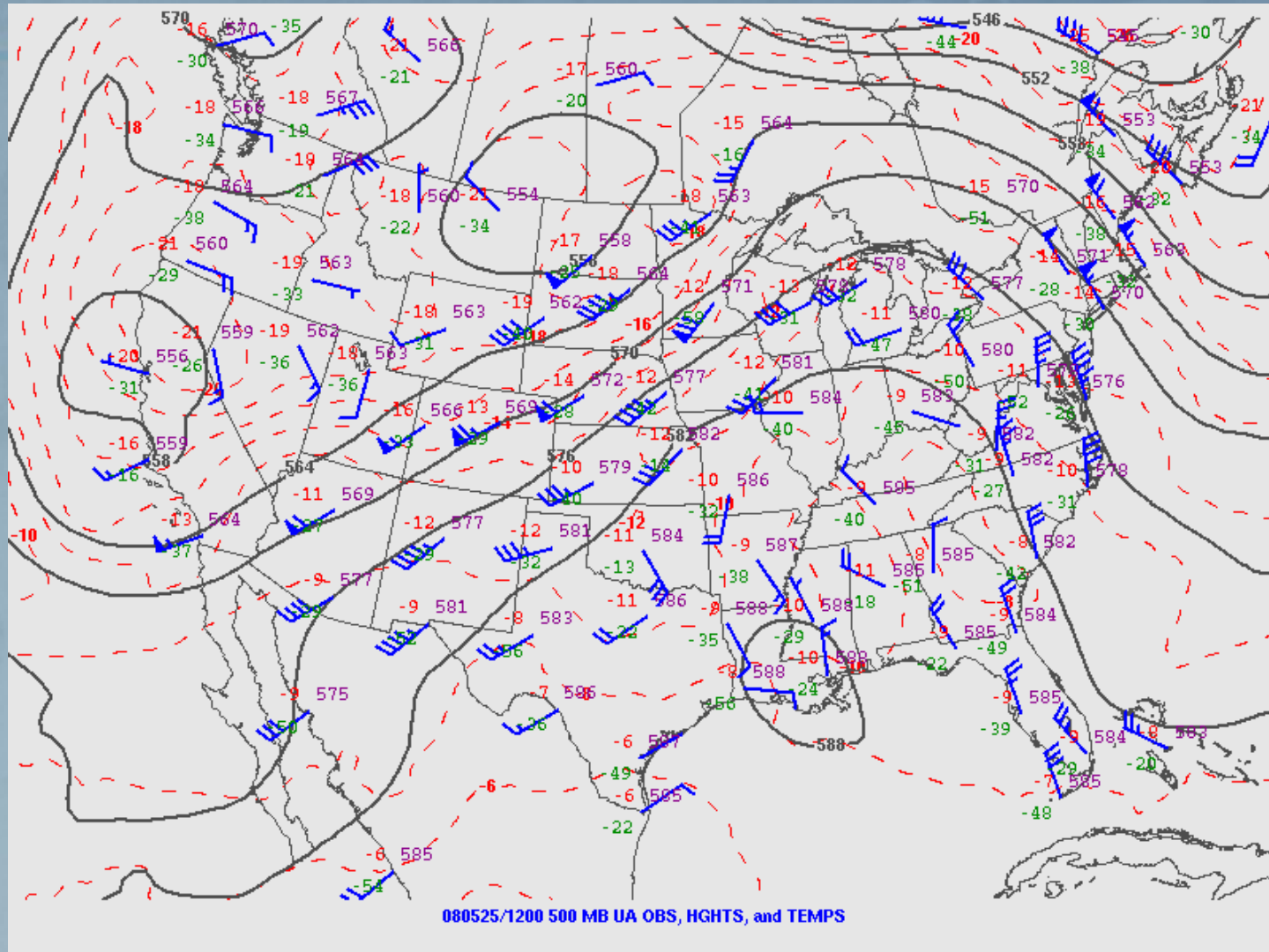
Topics

- Event Review
- WFO Des Moines Service Assessment
- Storm survey



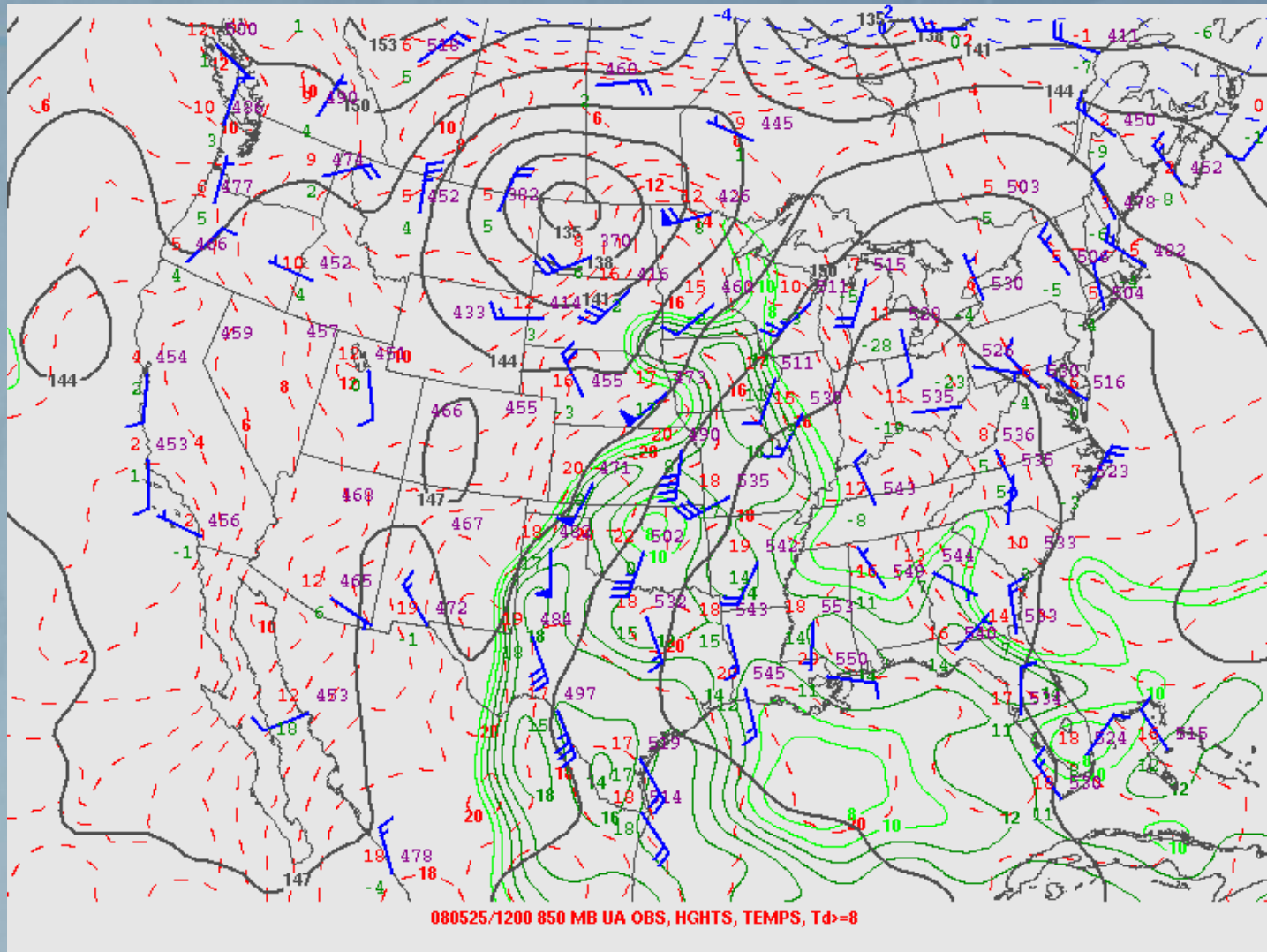
Courtesy IHSEM and Iowa Civil Air Patrol

Event Review



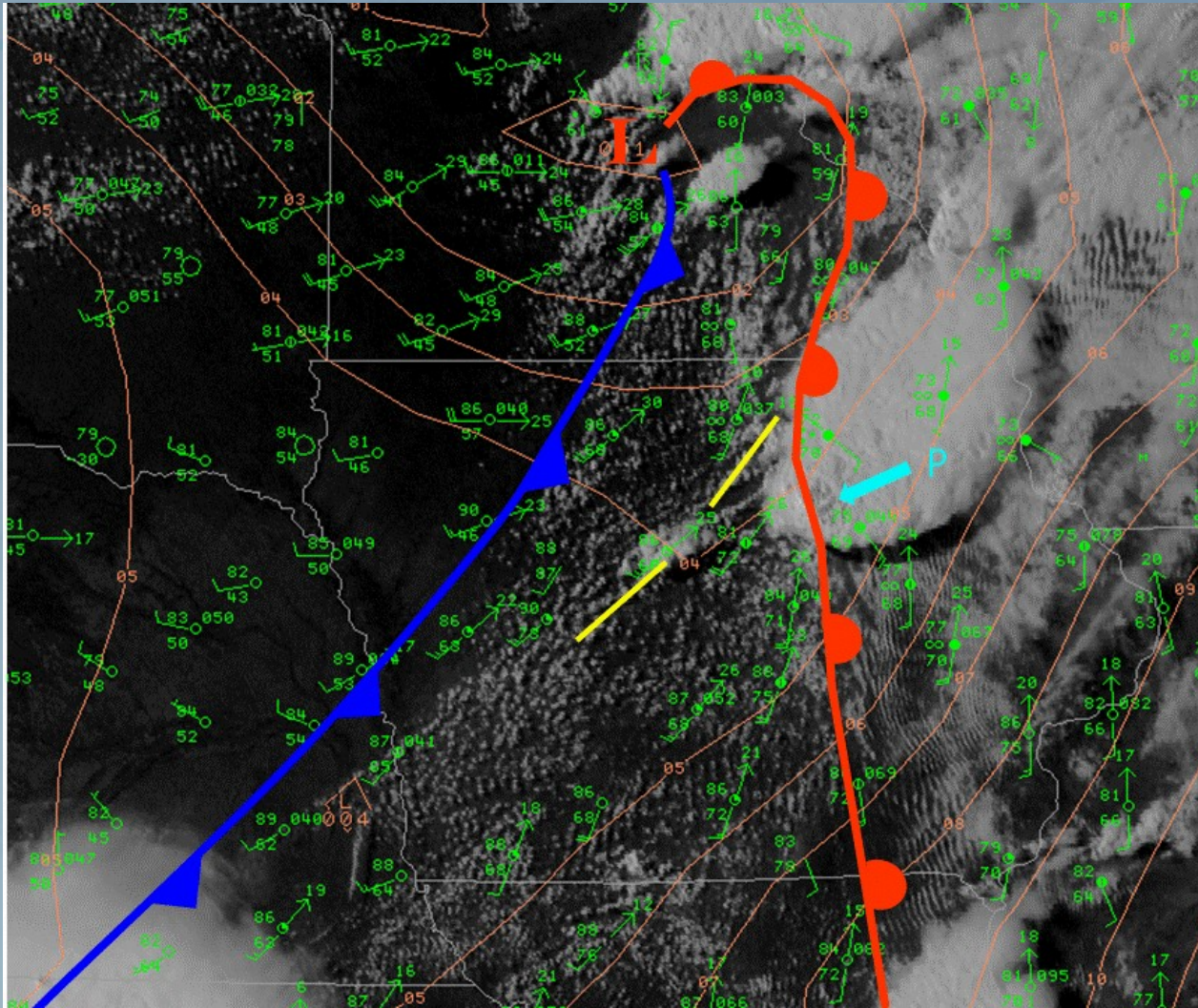
500 mb Analysis at 7 AM, May 25, 2008

Event Review



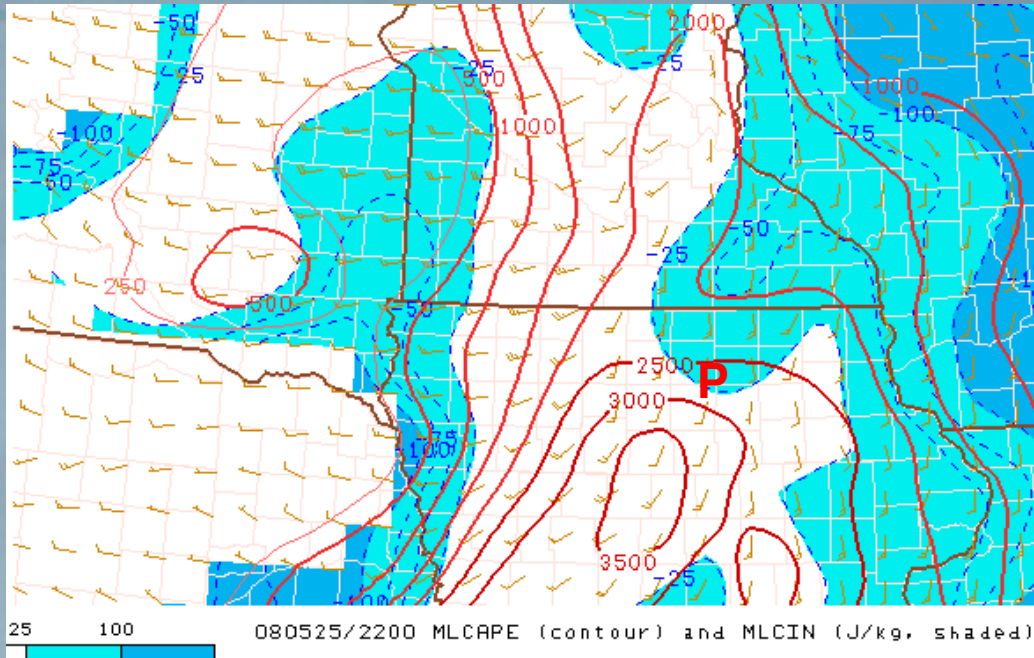
850 mb Analysis at 7 AM, May 25, 2008

Event Review

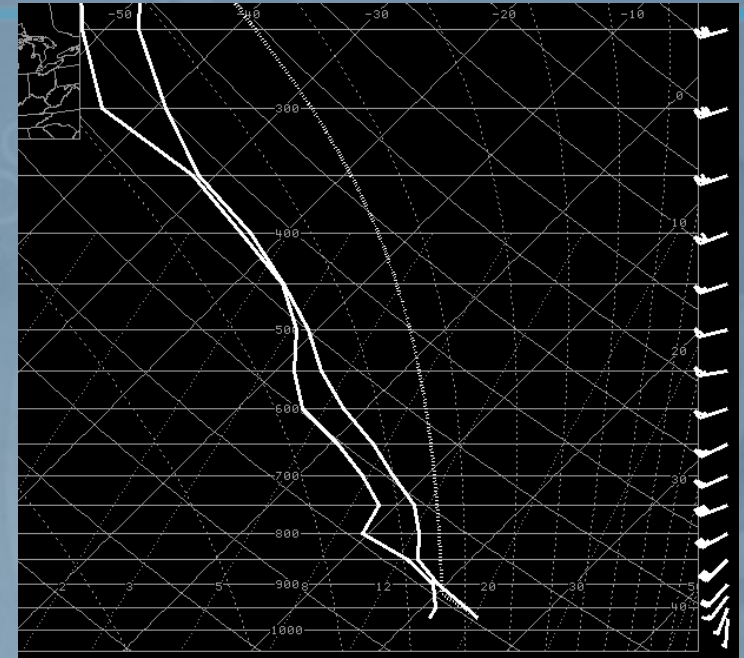


Surface Analysis, with visible satellite imagery at 520 PM, May 25, 2008

Event Review



MLCAPE at 5 PM, May 25, 2008



LAPS sounding for Parkersburg
at 5 PM, May 25, 2008

Instability, shear and low-level tornado
parameters were very favorable for
tornadoes

Event Review



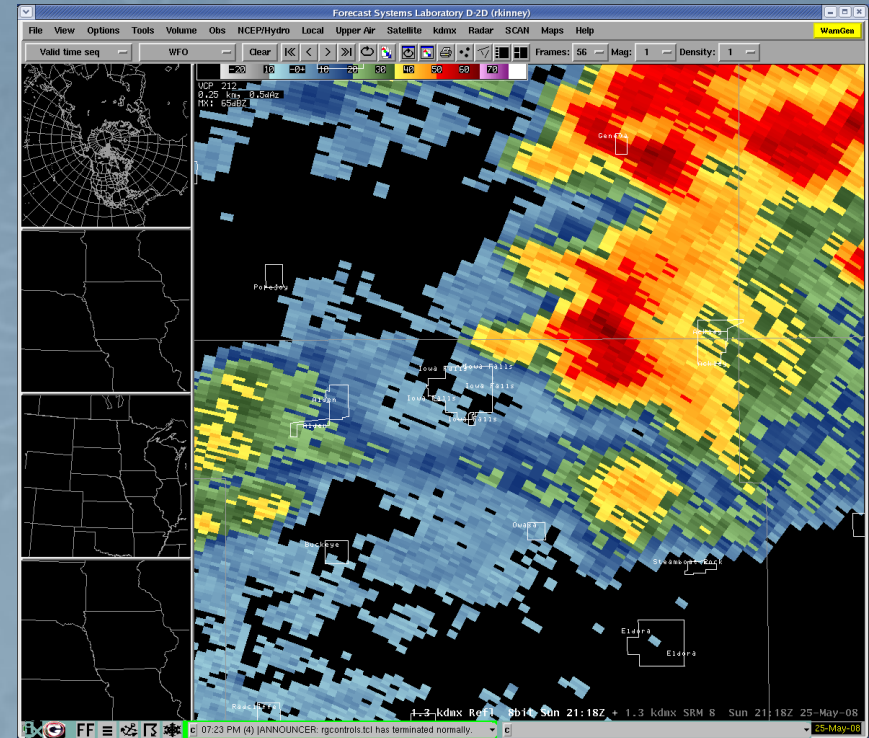
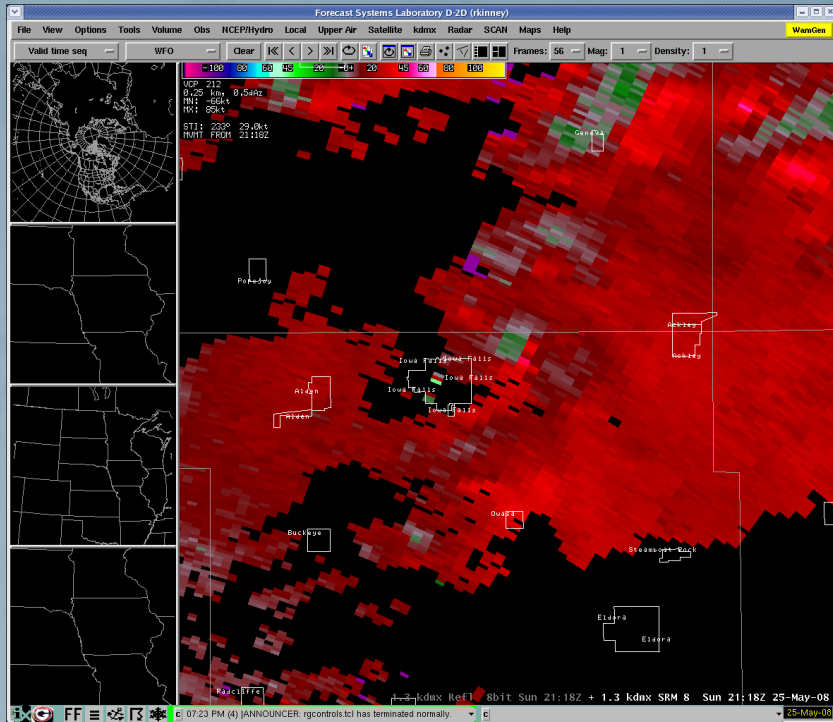
Issued at 330 PM, 5/25/08 and valid until 10 PM.

Watch was a PDS or Particularly Dangerous Situation Watch

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Event Review



Tornado warning for Parkersburg issued at 4:23 PM was issued for a storm near Ackley. The Parkersburg storm develop just to the south and quickly became dominate

Event Review



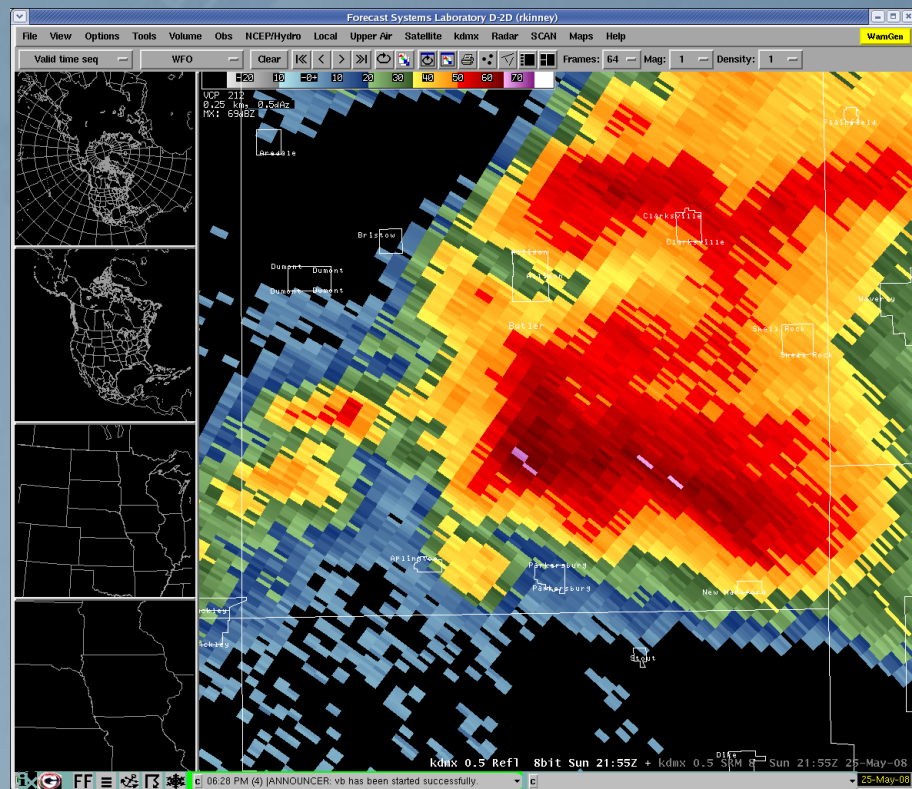
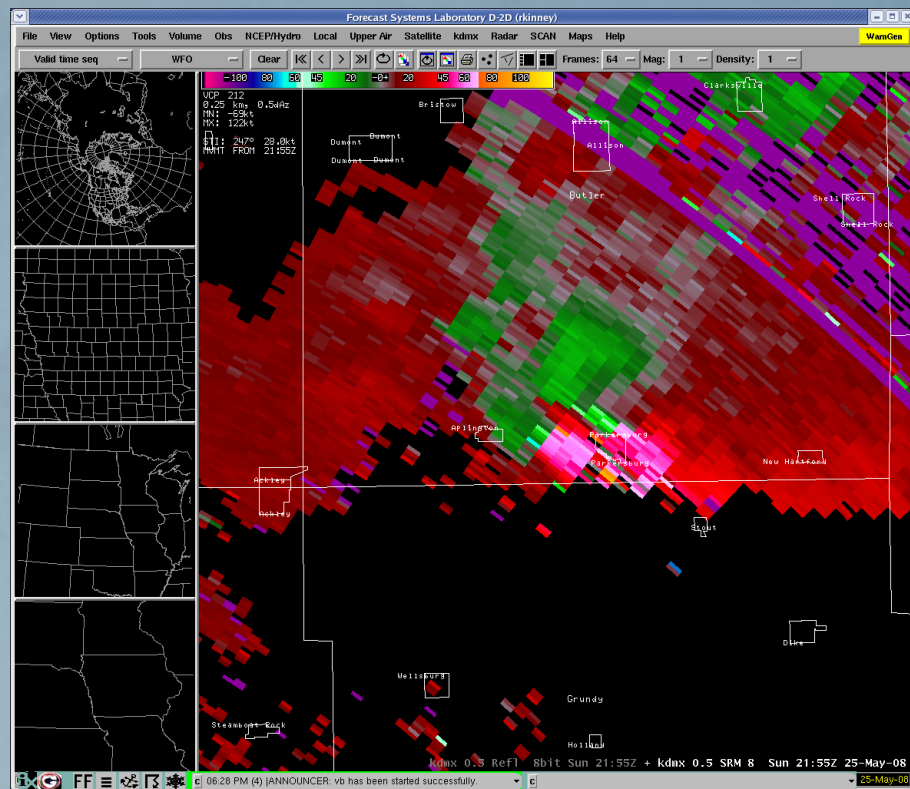
Courtesy Kevin Walter

440 PM – Southwest of Aplington. Strong rotation and 30-40 MPH inflow. Tornado formed south of Aplington at 446 PM



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Event Review



455 PM – High Resolution SRM and base reflectivity products as the tornado entered Parkersburg

Event Review



Courtesy Grundy Co Sheriff

455 PM – Large tornado just west of Parkersburg. Tornado became extremely violent early in its life cycle

Spotter and Response Challenges

- Rapid Development – Tornado formed at 446 PM and was producing at least EF4 damage within 5-10 minutes.
- Tornado was difficult to spot close-up – “Wedge” shape and a very short visible funnel from the bottom of the wall cloud to the ground.
- Long lead-time before initial tornado development (23 minutes) – Helped get spotters in position. How about response to the warning?
- Holiday Weekend – Sunday of Memorial Day weekend.
- New siren system was not activated until around 450 PM.



Event Review



Courtesy Grundy Co Sheriff

455 PM – Close-up of tornado as it moved into Parkersburg



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Event Review



Courtesy IHSEM and Iowa Civil Air Patrol



Courtesy First State Bank

Looking north from the bank at around 500 PM



Event Review



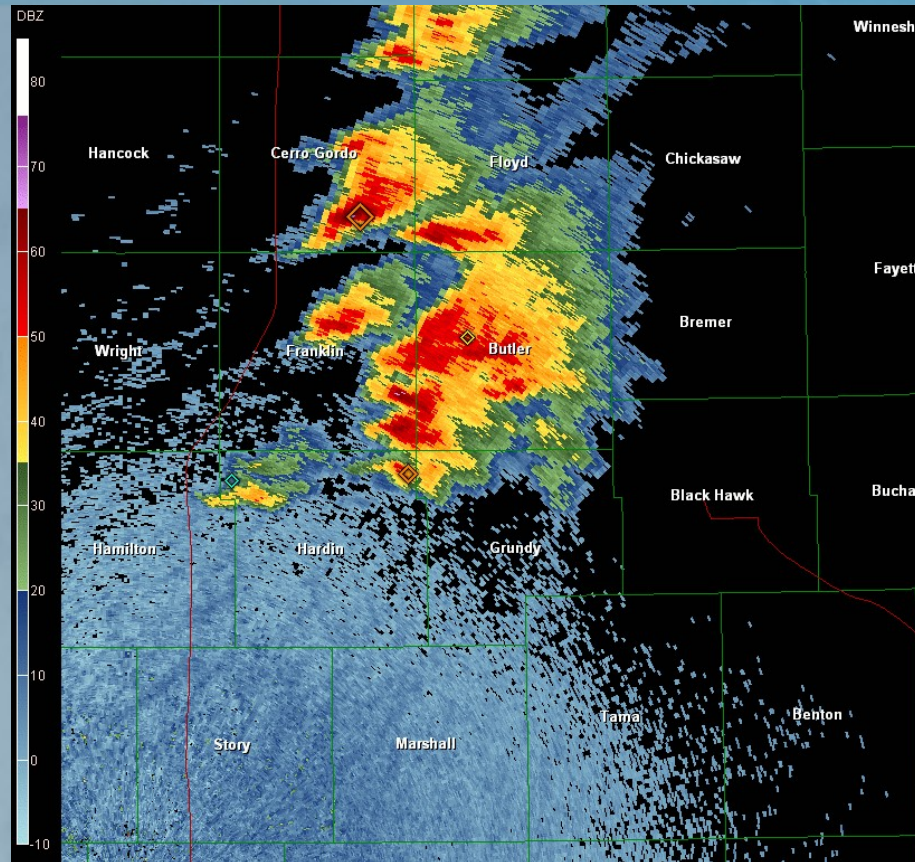
Courtesy First State Bank

Inside the bank

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Event Review



Radar loop of supercell storm using Gibson-Ridge software

Event Review

Tornado Facts

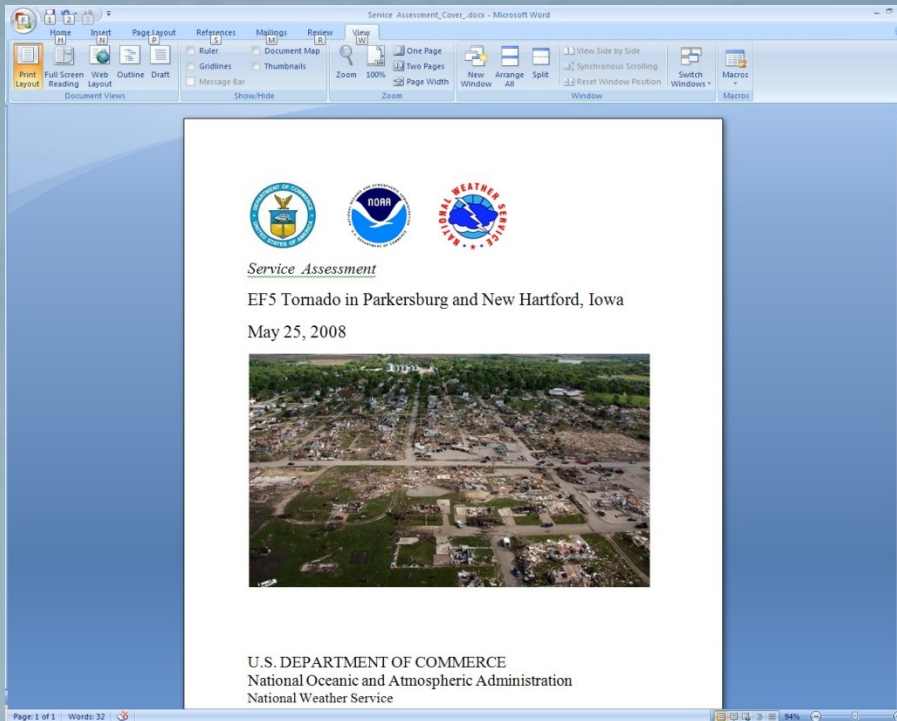
- First EF5 to hit Iowa since June, 1976
- Deaths: 9
- Injuries: Approximate 50
- Path: 43 Miles



1 Mile East of New Hartford. Tornado on the Right Side of the Picture. Courtesy of Rod Donavon

Local Service Assessment

- WFO Des Moines based
- Format similar to national assessments
- Assessment team consisted of five WFO Des Moines employees
- Assessment was reviewed by NWS Central Region
- Assessment available on WFO Des Moines website



Local Service Assessment

Three areas were reviewed

- Internal operation and products
- External service and response
- Meteorological Review



Local Service Assessment

Results

- Assessment team found 21 findings and included recommendations for each
- Recommendations will be integrated into policy and procedures where possible
- Science review should provide a foundation for meteorological case studies



Local Service Assessment

Important Findings

- Dispatcher Training – New 911 dispatchers need to be trained about severe weather communications – Now required for WFO StormReady communities
- Responders did not know the tornado watch was a PDS watch



Storm Survey and Damage Review

Karl Jungbluth, Science and Operations
Officer, WFO Des Moines

