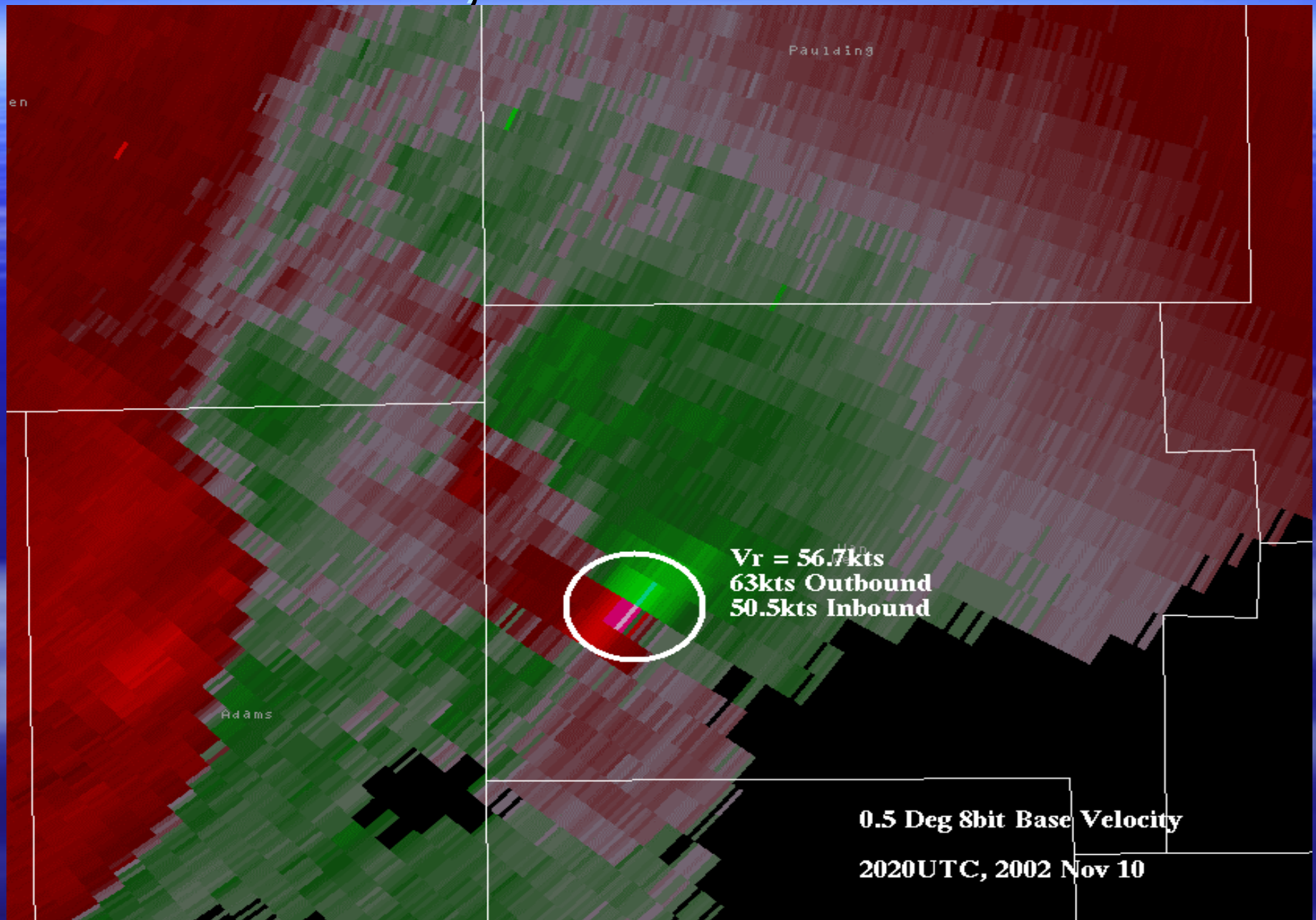
WSR-88D Operations
WFO Northern Indiana

What Works…What Doesn't

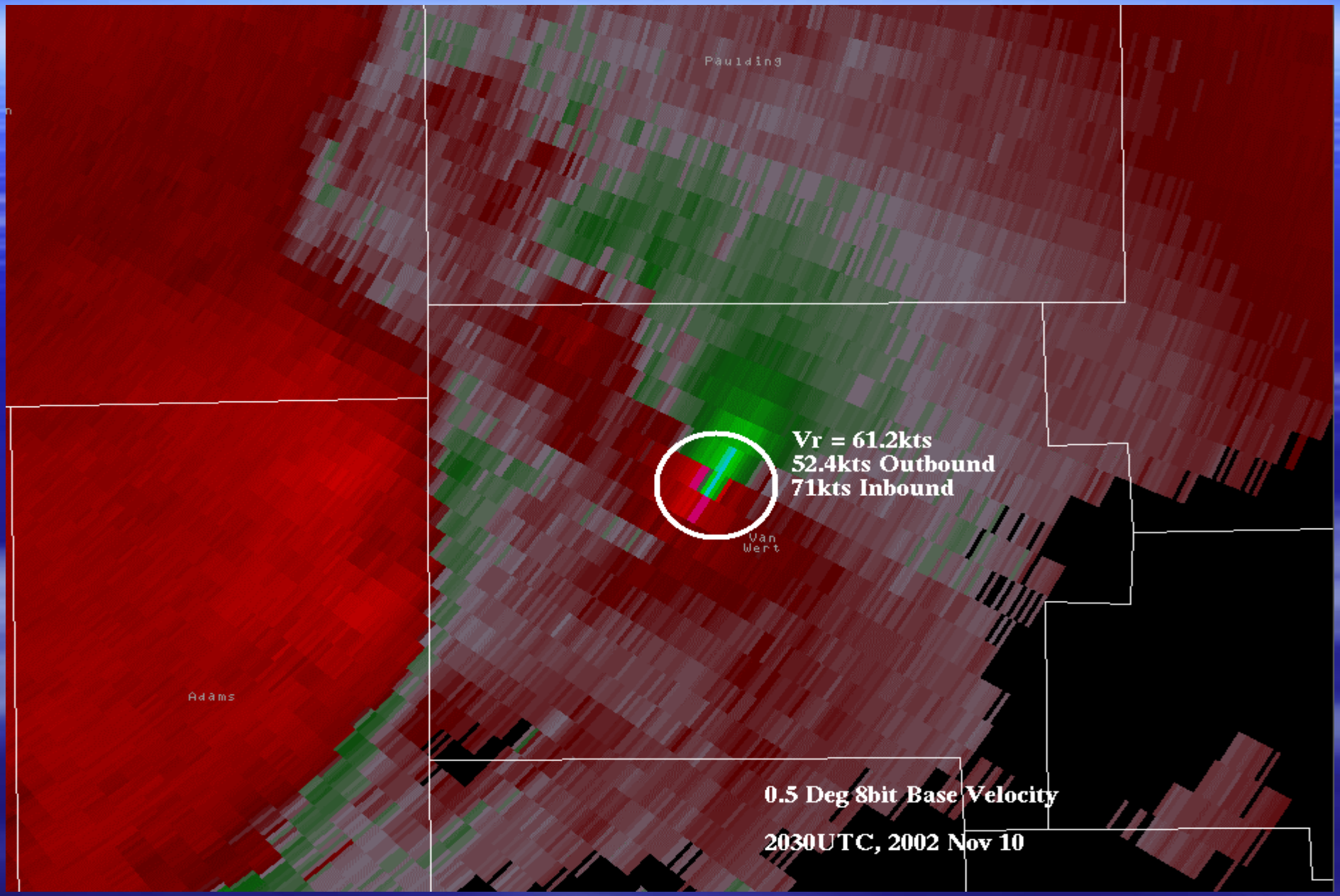
- 8-Bit Data by far best improvement

- 8-bit velocity particularly beneficial
  - really emphasizes areas of damaging wind potential in squall lines/bow echoes
  - Greater detail in meso circulations

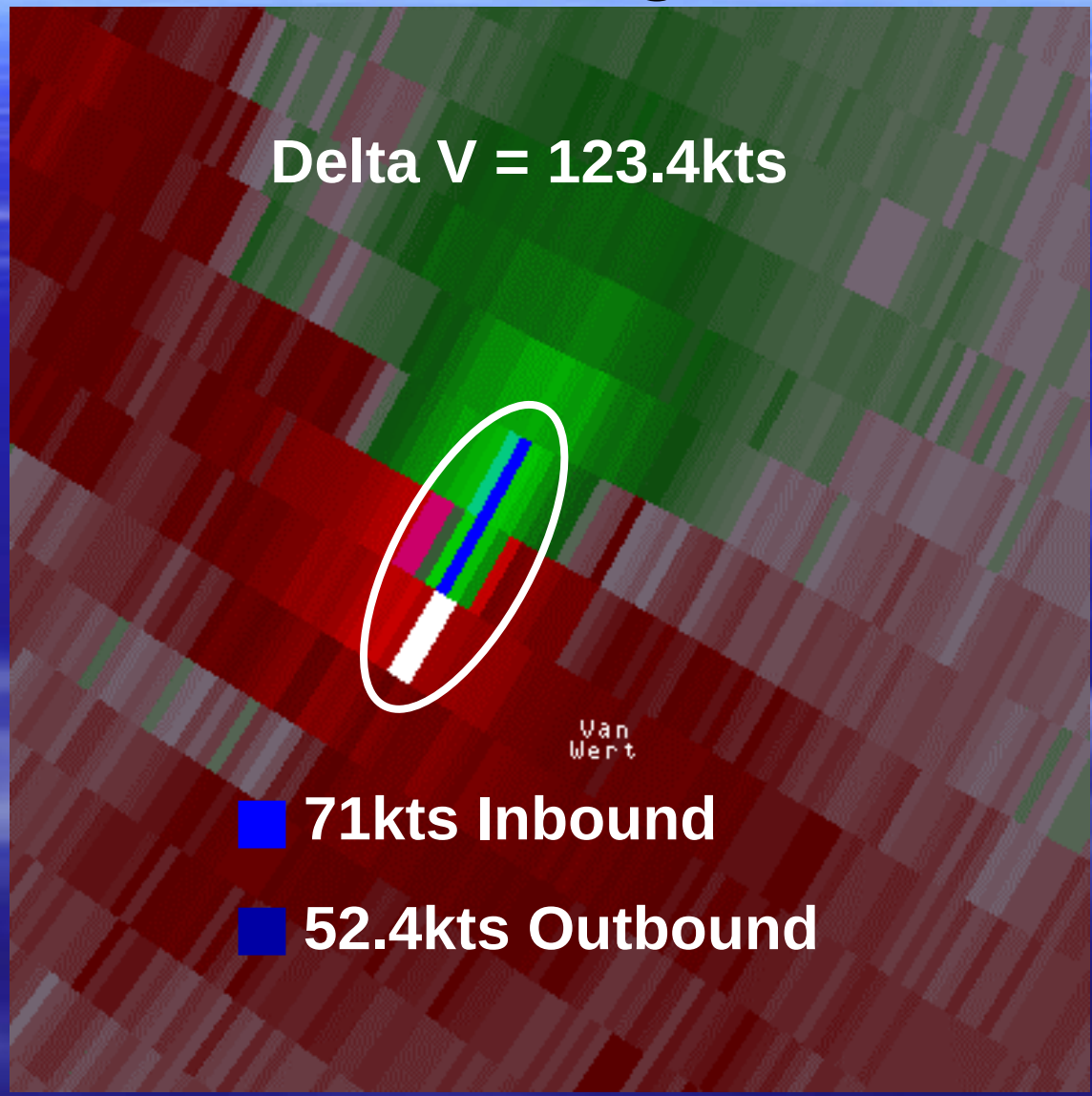
November 10, 2002 Van Wert Tornado



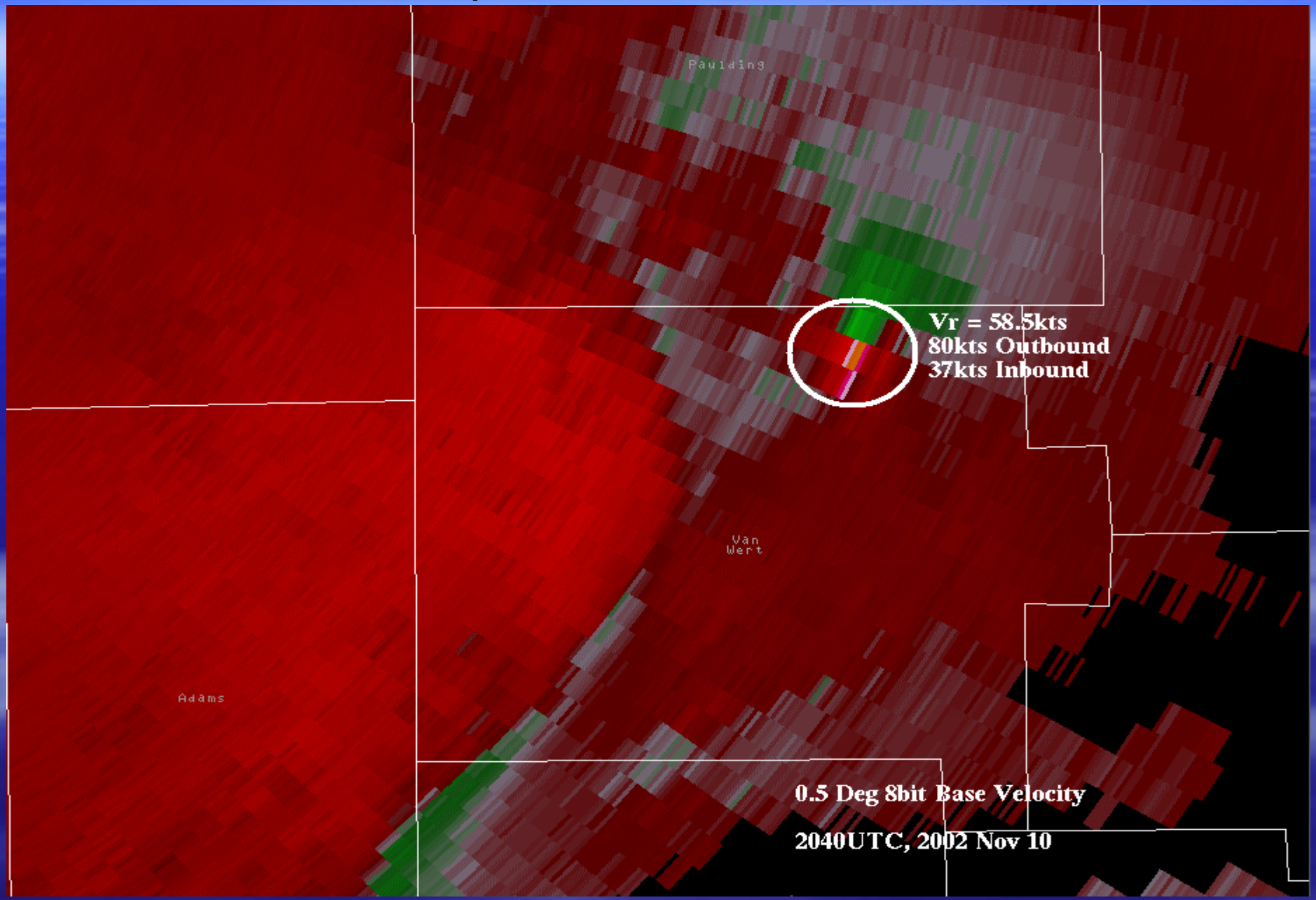
November 10, 2002 Van Wert Tornado



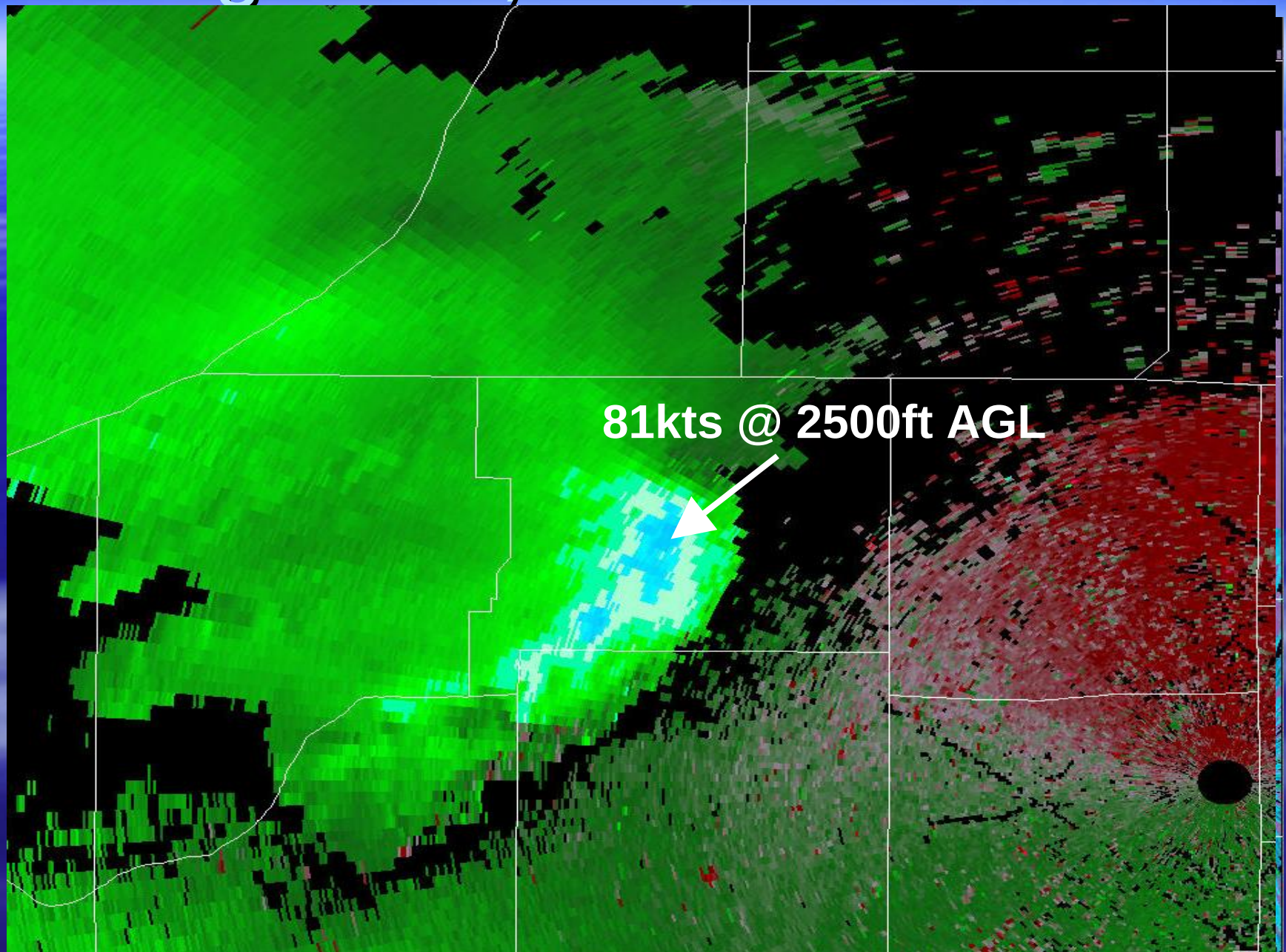
8-Bit Base Velocity
Tornado Producing F4 Damage



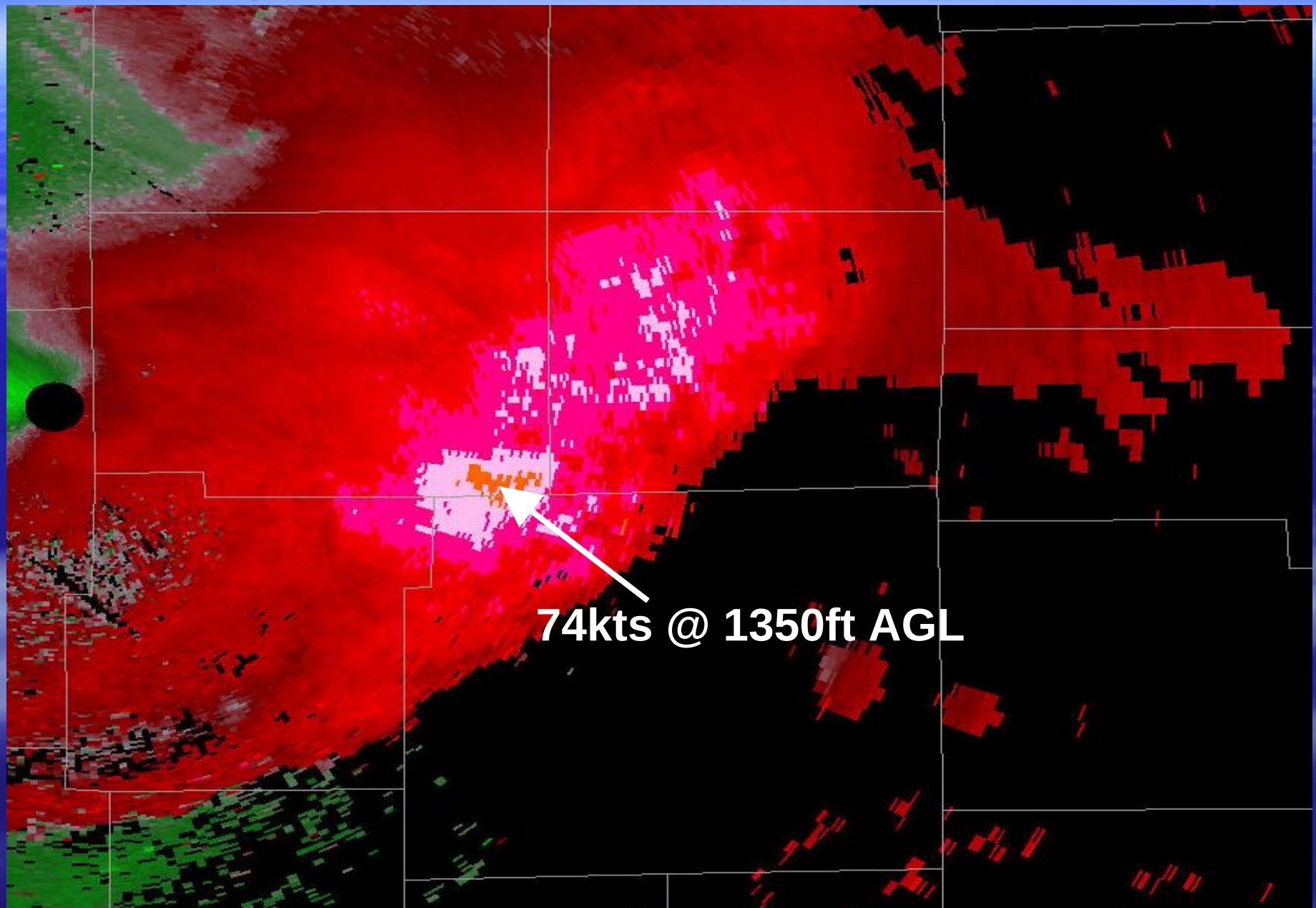
November 10, 2002 Van Wert Tornado



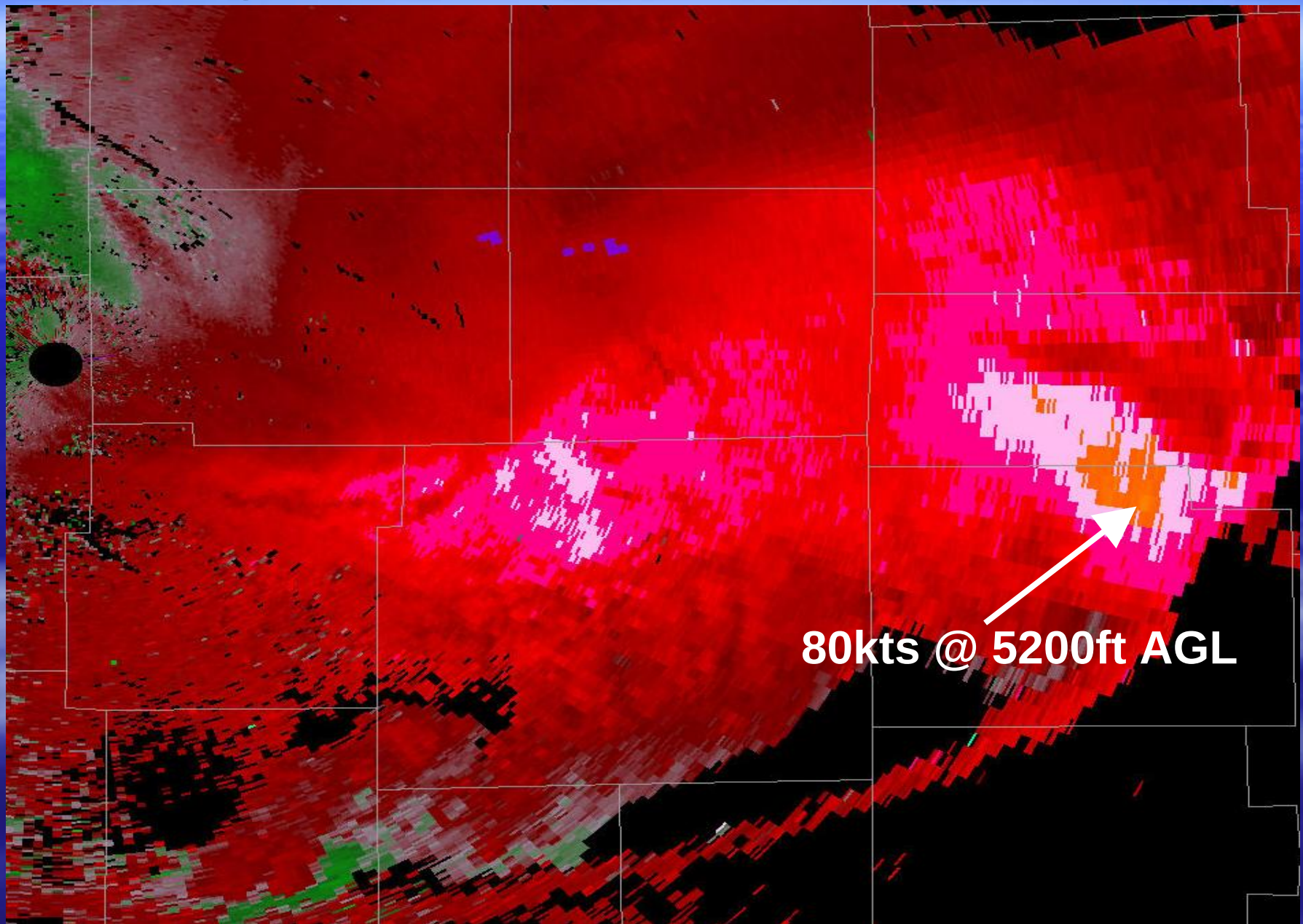
August 26, 2003 Wind Event



August 26, 2003 Wind Event



August 23, 2003 Wind Event



What Works…What Doesn't

- Algorithms and SCAN least beneficial
  - General consensus is that FAR too large on MDA and TVS algorithms
  - TVS identification w/o MESO constraint has resulted in too many false alarms.

What Works…What Doesn't

- SCAN has better performance now with linux workstations but left such a "bad taste" with forecasters initially that few use it
  - Best utility likely with meso-analyst desk not radar/warning met

- New VCP's
  - 121 very favorable reviews…extra slices at lower elevations has good utility on days where wind and/or tornadoes are main threat
  - 12 not so favorable…too much load shedding

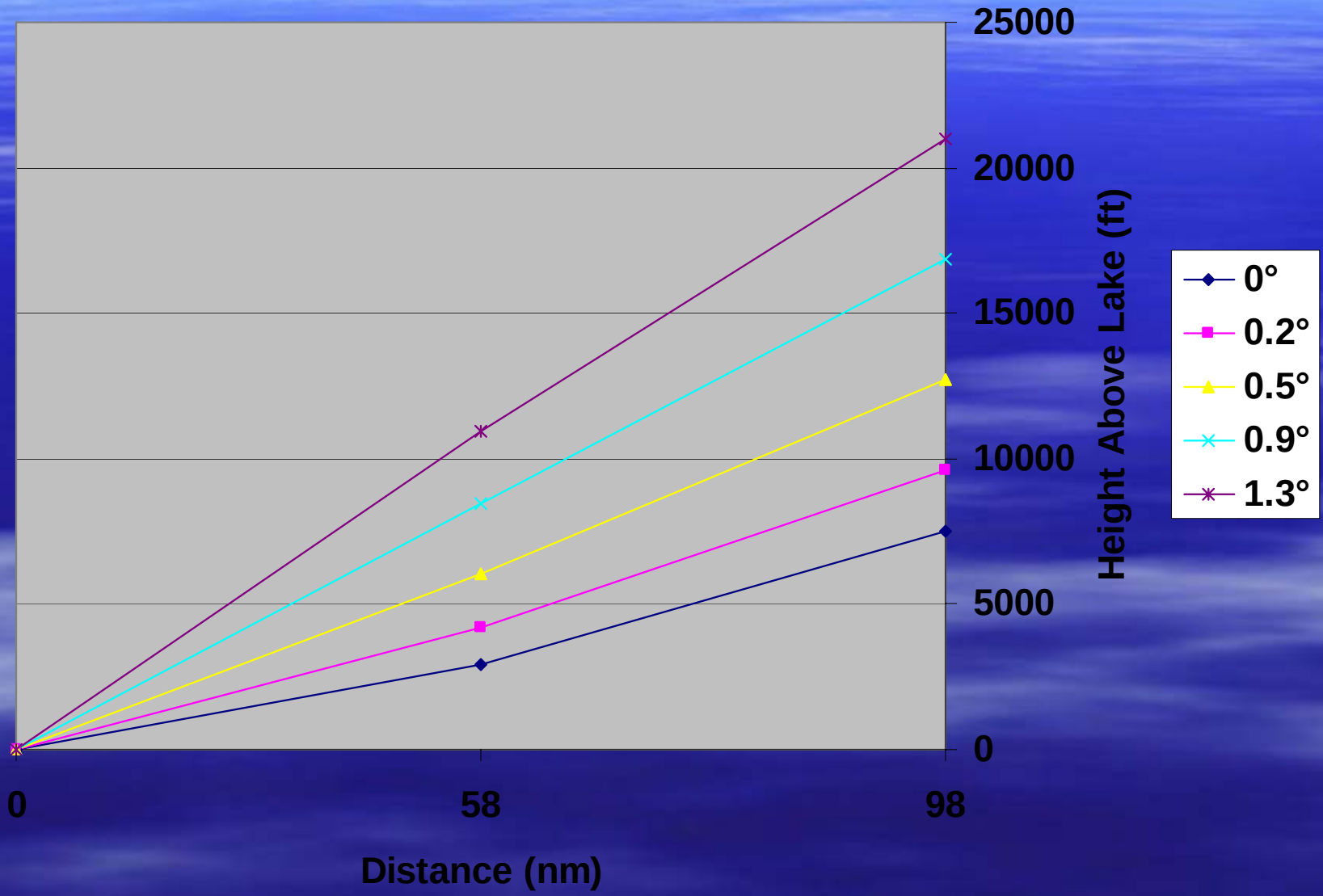
What we would like…wish list

- Overall…more time/money/effort continued at getting us high quality base data, less resources spent on algorithms
- Cross-sections available in 8-bit data
- Time/height plots that are available in RADS on WATADS…rotational velocity etc.

What we would like…wish list

- <0.5 Degree elevation scan
  - Detecting lake-effect snow bands
    - Better view of developing bands out over the lake
    - Pick up on mid-lake vortices
    - Could be part of a new “snow” VCP
  - Better view of convective storms at perimeter of our CWA

KIWX WSR-88D Beam Propagation



Wish list and other questions

- WDSSII…still an unfunded budget item?
- STI Plus…Forecast storm structure and intensity along with position
- Dual polarization, phased array radar, filler radars on cell towers?
- Valparaiso University radar project

From WNDU in South Bend

- Projects storm structure and intensity

Conclusion

- Forecaster's like the improved base data
  - Hi-res 8bit data best improvement by far
  - Anything that will add to this and at the same time anything that improves data quality
    - Mitigate range folding and dealiasing
- ORPG Build 5 and Build 6 have provided good training material and overviews of what's new/different/changed…keep it coming!