

Operational Benefits of Phased Array Radar Data During a Significant Tornado Event: 31 May 2013

Charles M. Kuster (CIMMS), Pamela L. Heinselman (NOAA NSSL), Marcus Austin (NWS Norman)

Warning forecaster examined rapid-update PAR data and conventional WSR-88D data

- Compare significant storm-scale features and evolution
 - Quantitative analysis of important features
- Goal: Determine impact of radar update time on warning decisions in an environment clearly favorable for tornadoes



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426pm - only storms in our area are in Kay county, not severe yet. Environment S of I-40 is prime for supercells and tornados! Stay alert!



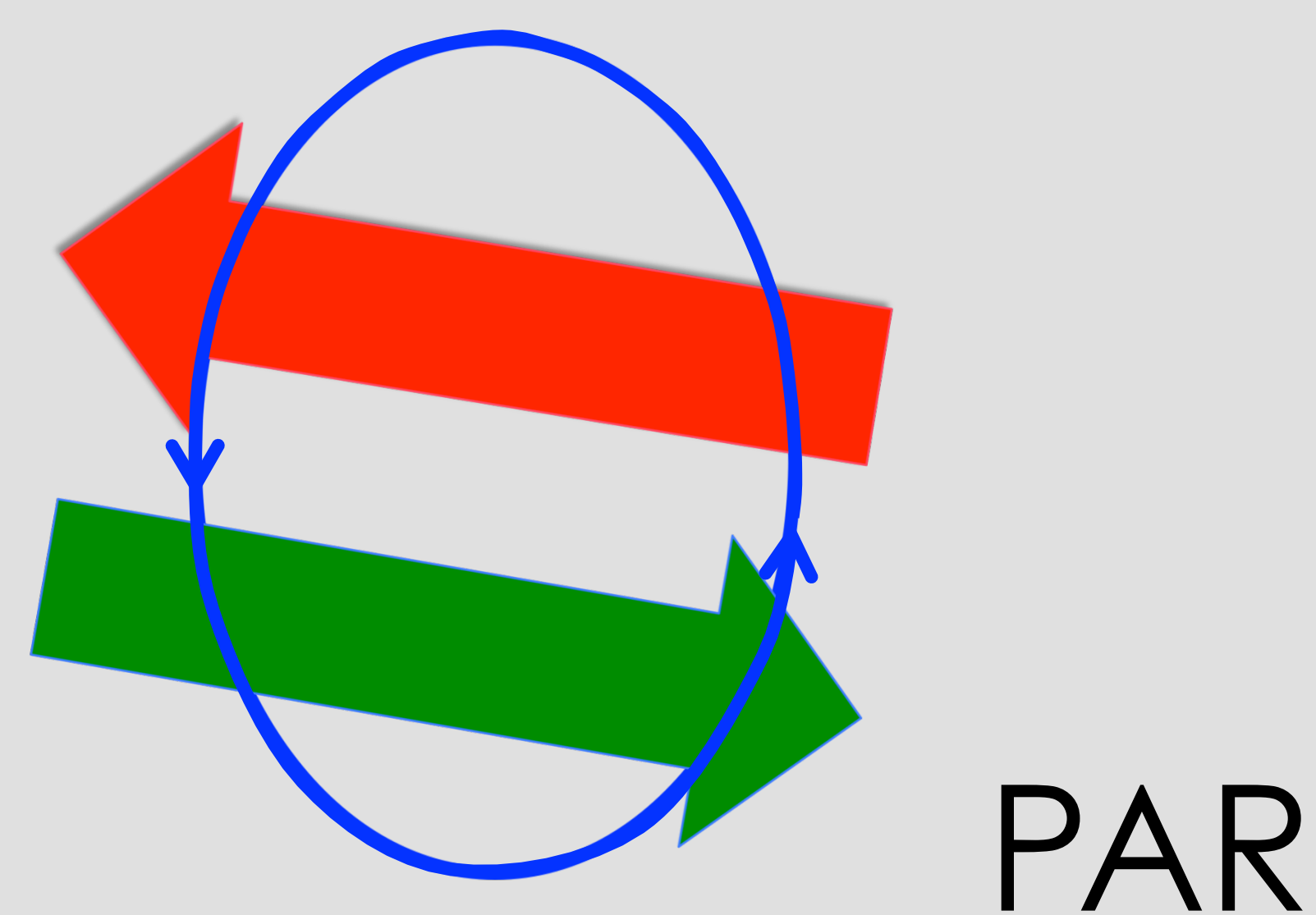
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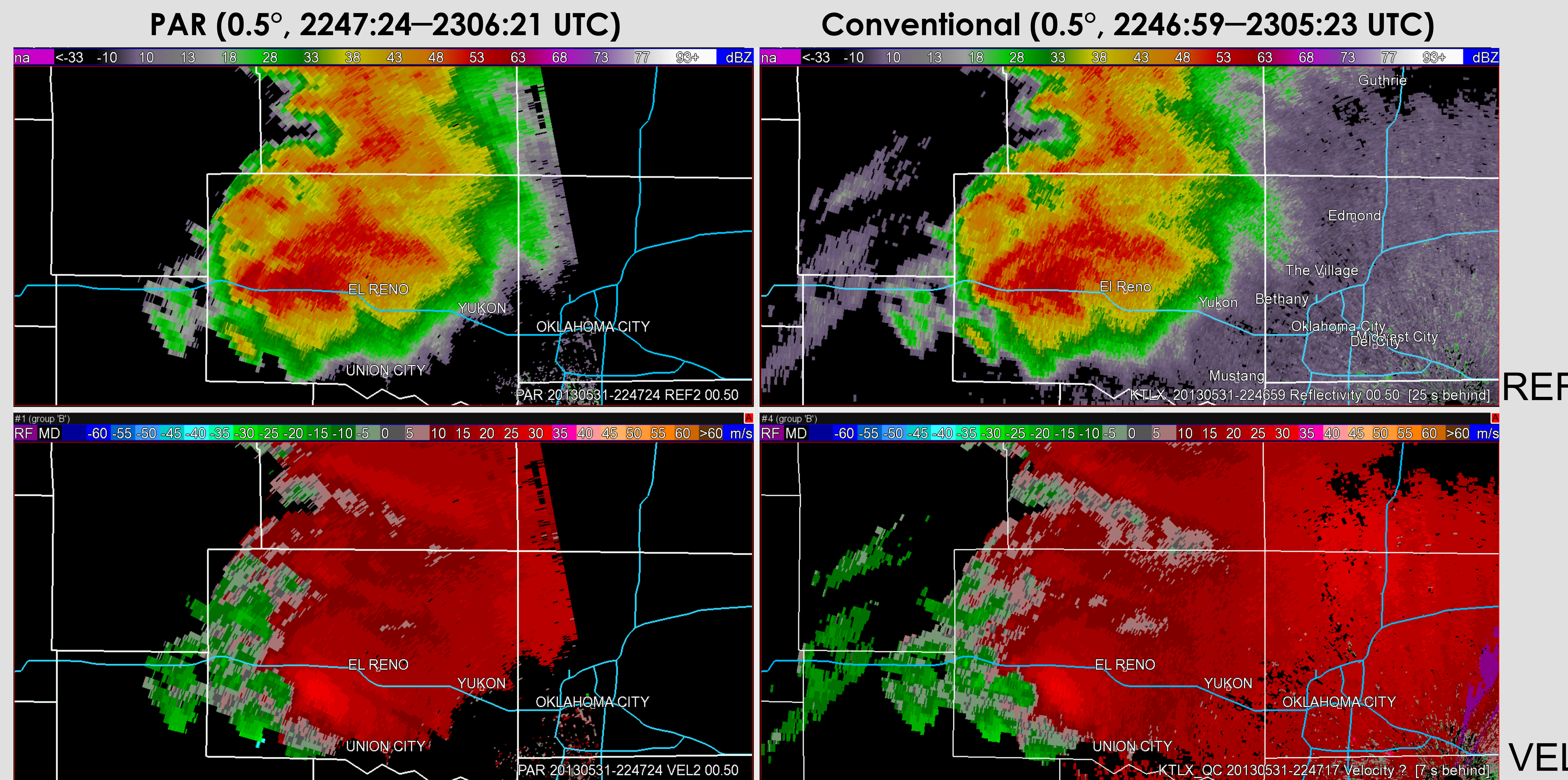
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Radar velocities:

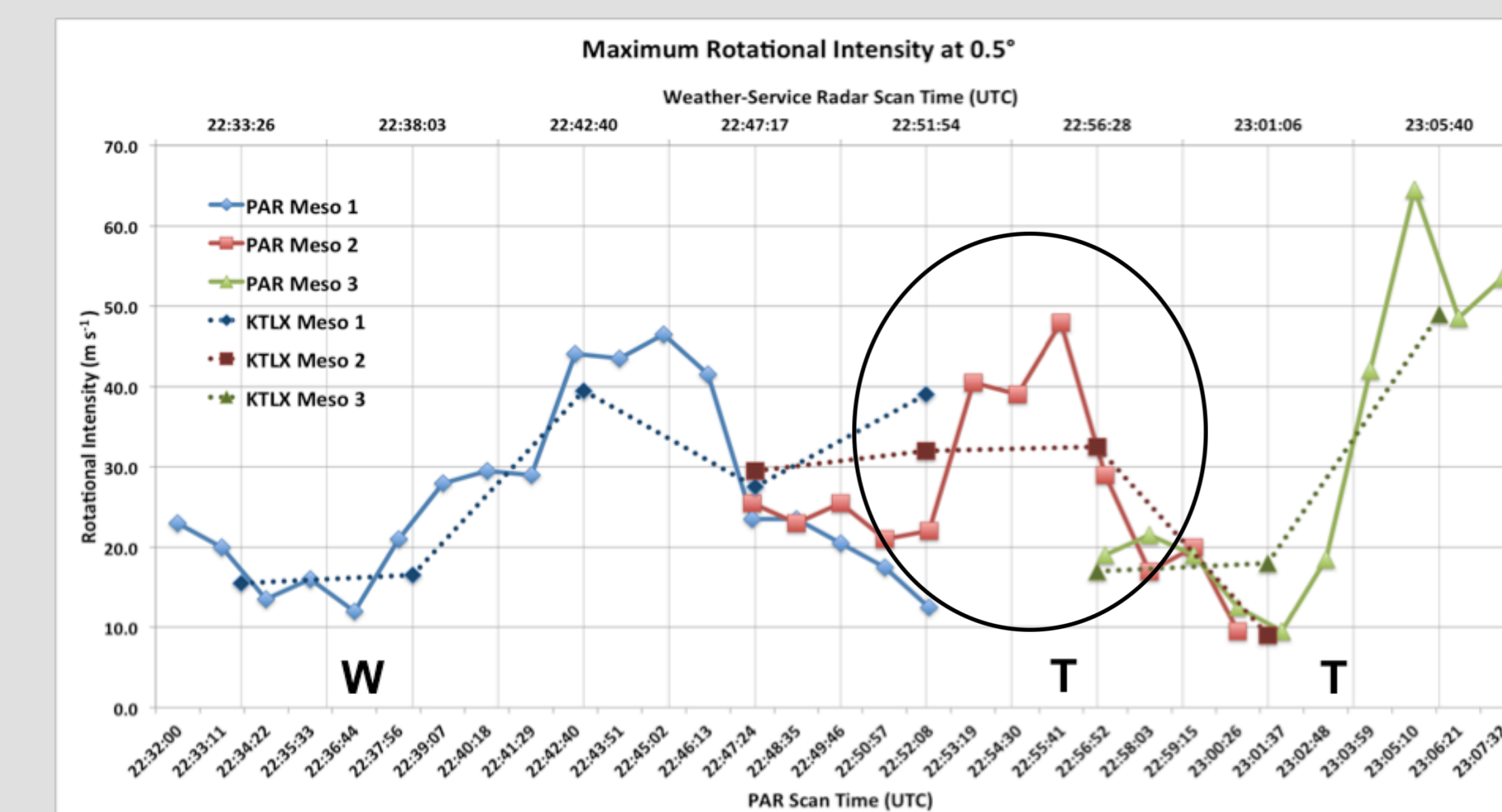


Impact of PAR: Forecaster better able to observe storm organization and tornadogenesis



Benefits:

1. Clearer radar-based evidence of brief tornado and strong tornado development, providing validation of ongoing warnings
2. More confidence in position and motion of tornado for use in warning issuance/updates



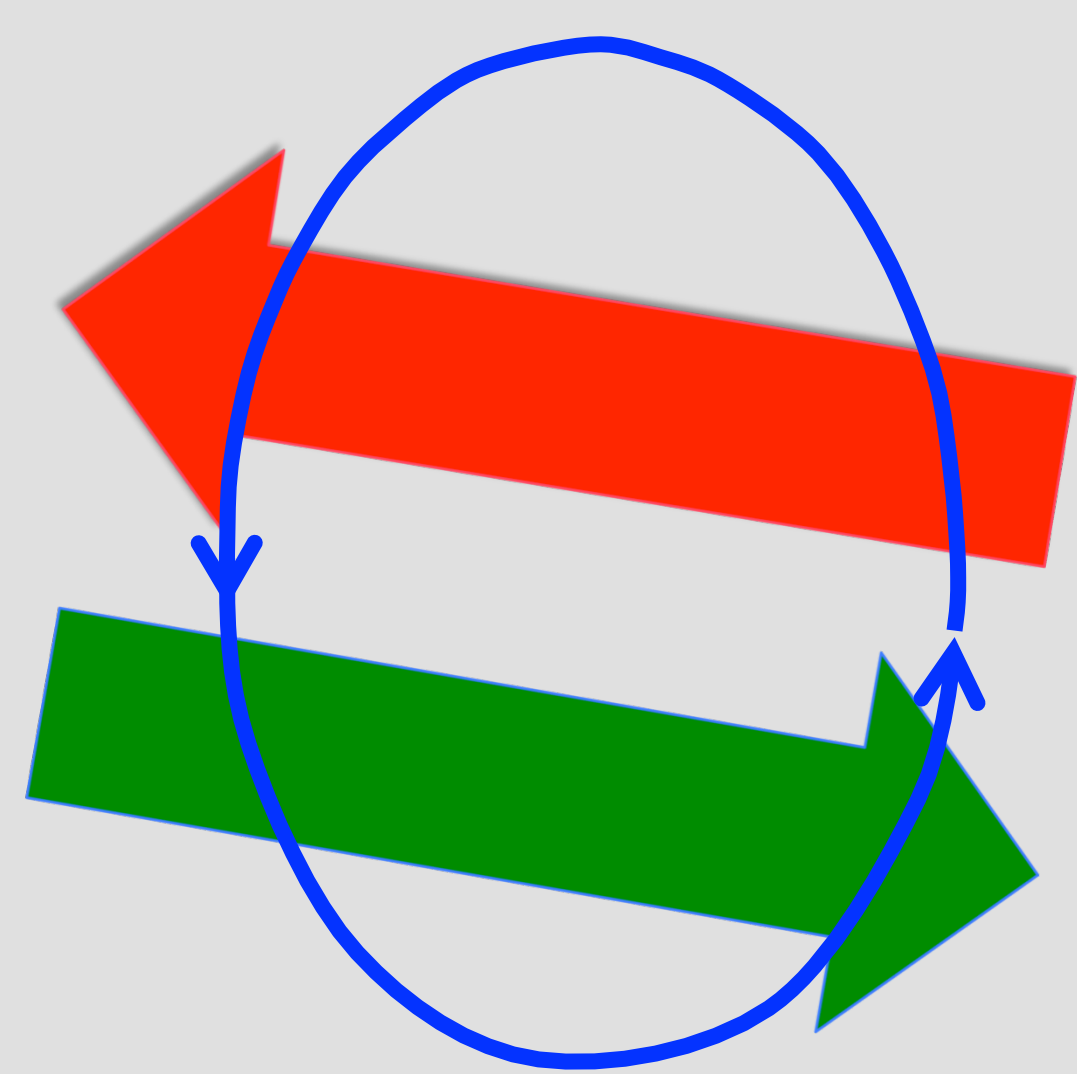
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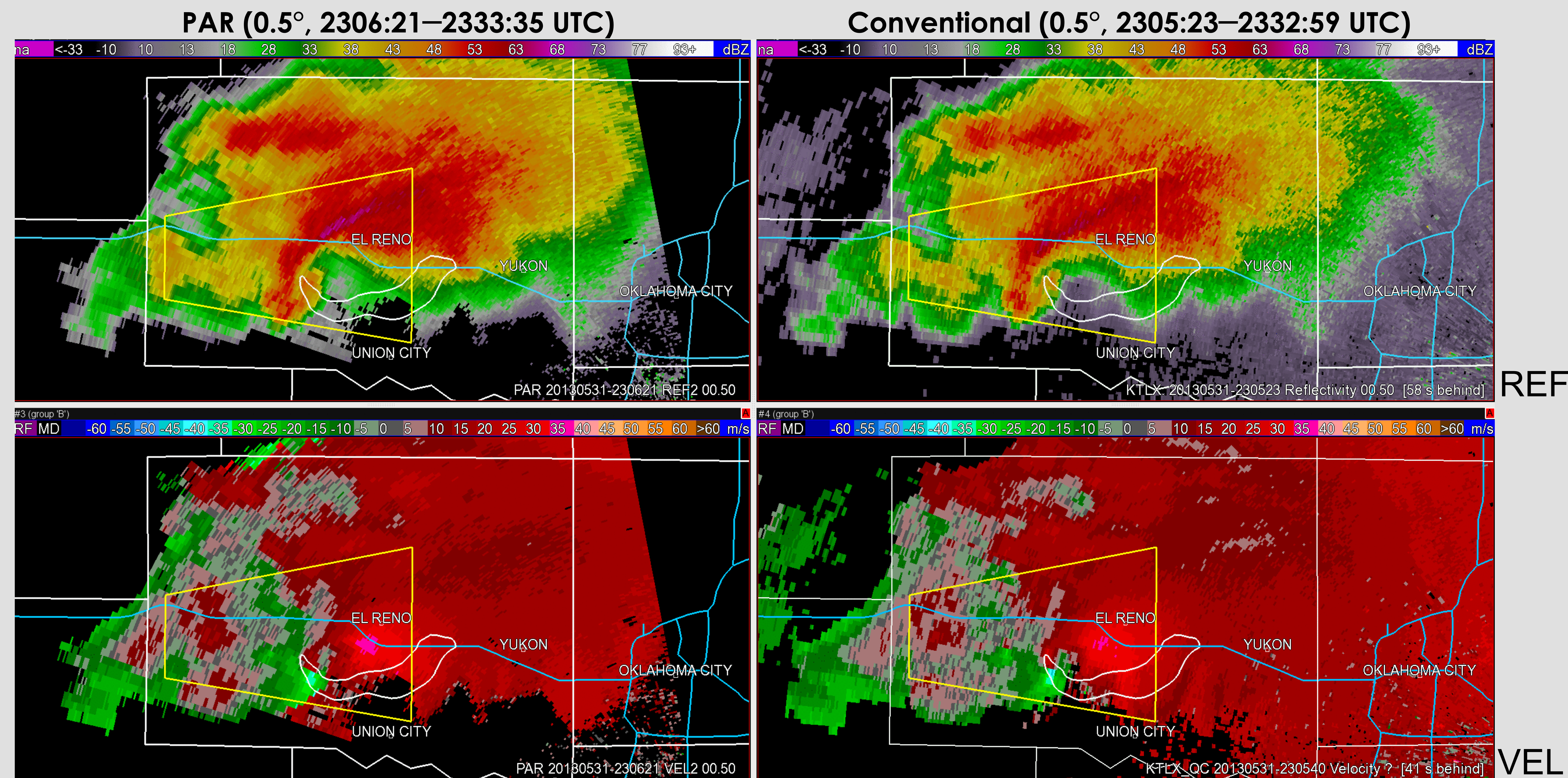
- Compare significant storm-scale features and evolution
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Radar velocities:



PAR

Impact of PAR: Forecaster better able to observe rapid changes in tornado motion



Benefits:

1. Clearer radar-based evidence of brief tornado and strong tornado development, providing validation of ongoing warnings
2. More confidence in position and motion of tornado for use in warning issuance/updates



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Radar velocities:

