



***Adventures in probing tornadoes and their parent supercells
with mobile, rapid-scan, Doppler radars***

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Rapid-scan Doppler radar measurements of tornadoes and their parent supercells have allowed us to view aspects of tornadogenesis that would otherwise be impossible to document because they take place on time scales too short to measure with conventional radars. During the past decade we have been using a mobile, phased array, X-band Doppler radar from the Naval Postgraduate School and a mobile, mechanically scanning, polarimetric, X-band, Doppler radar from the University of Oklahoma to make measurements during annual spring field experiments in the Plains of the U. S. In this talk I will summarize what we have learned about the following aspects of tornado behavior: (1) the origin of tornadogenesis in supercells from the perspective of the Tornadic Vortex Signature (TVS); (2) the behavior of sub-tornado-scale vortices in a violent, multiple-vortex tornado (El Reno, OK – 31 May 2013); and (3) the behavior of polarimetric signatures such as the Tornado Debris Signature (TDS) and the Z_{DR} column. Experiments in retrieving the wind field in supercells by tracking reflectivity and other miscellany may also be discussed (to fill the remainder of the time and astound the audience).

This seminar will be webcast live at:

<http://www.fin.ucar.edu/it/mms/fl-live.htm>

Recorded seminar link can be viewed here:

<https://www.mmm.ucar.edu/events/seminars>

Thursday, 8 December 2016, 3:30 PM

Refreshments 3:15 PM

NCAR-Foothills Laboratory

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