

ATS/CIRA Colloquium

Matt Kumjian

Visiting CSU ATS from NCAR

**Precipitation Physics Revealed through Dual-polarization
Radar Observations and Modeling**

Hosted by Steve Rutledge

Thursday, March 28, 2013

**ATS room 101; Discussion will begin at 3:30pm
Refreshments will be served at 3:00pm in the weather lab**

Dual-polarization radar data provide great insight into the types and distribution of hydrometeors in storms. This information can be used to study a variety of precipitation processes. This talk will cover radar observations of warm-rain physics (collisional breakup, coalescence, evaporation, and size sorting), the lofting and freezing of raindrops in deep convective storms and the appearance of so-called "ZDR columns", and the refreezing of melted/melting hydrometeors in winter storms to form ice pellets. By understanding and quantifying the fingerprints of different processes on the polarimetric variables, we can improve our understanding and interpretation of radar observations. In addition, this information can be used to critically examine and validate microphysics parameterization schemes used in numerical models of a variety of scales.

Link to colloquium videos and announcement page: <http://www.atmos.colostate.edu/dept/colloquia.php>