**ATS/CIRA Colloquium**

# Zhien Wang

**Visiting ATS from the University of Wyoming**

# Recent Advances in University of Wyoming King Air Observation Capabilities

**Hosted by Sue van den Heever**

**Friday, Feb. 17, 2017**

**ATS room 101**
**Discussion will begin at 11:15 a.m.**
**Refreshments will be served at 10:45 a.m. in the weather lab**

University of Wyoming King Air (UWKA) is a part of NSF-supported Lower Atmosphere Observing Facilities (LAOF). Through multi-year development efforts, UWKA has equipped with integrated observation capabilities for cloud dynamics and microphysics, aerosols, and environment conditions through combining lidar, radar, radiometer and in situ measurements. Approaches were developed to retrieve droplet and ice concentrations in stratiform clouds from combined lidar-radar measurements. The new addition of a Ka-band precipitation radar (KPR) allows us to improve cloud and precipitation characterizations with dual-frequency radar techniques. Meanwhile, dual-Doppler measurements provide 2-D cloud-scale dynamics. The simultaneous measurements of aerosol, temperature, and water vapor from airborne Raman lidars transform UWKA into an efficient platform for atmospheric boundary layer processes study, especially combined with various in situ measurements. Observation examples or case study will be presented to highlight these new observational capabilities. As a part of NSF LAOF, these new observational capabilities are available to the University research community. Information to request UWKA facility can be found at https://www.eol.ucar.edu/node/86 and http://www.atmos.uwyo.edu/uwka/.

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