NCAR Research Applications Laboratory
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RAL SEMINAR SERIES

Investigating Precipitation Processes over CONUS with Objective Storm Tracking

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1-2 PM (MT) FL2-1022 or Virtual | Watch Live

Small shifts in precipitation frequency, intensity, duration, and/or phase can determine whether a storm provides beneficial replenishment of snowpack or reservoirs or causes a devastating blizzard or flash flood. Better precipitation predictions, both on weather forecasting and climate projection timescales, require improved understanding of the complex, multiscale processes that produce precipitation.

This talk will demonstrate my research group's recent and current work investigating precipitation processes in observations and models, including the NCAR-USGS CONUS404 simulations, through objective storm tracking and classification. In particular, I will discuss how tropical cyclones and their precipitation in CONUS404 compare to observations and how they differ in the CONUS404 pseudo-global warming simulations compared to the historical simulations. Continuing analysis of CONUS404 includes the development and application of a software tool to objectively link mesoscale convective systems to larger-scale storm systems. Finally, I will discuss early analysis of data from the Seeded and Natural Orographic Winter Storms Catchment Processes and Evaluation (SNOWSCAPE) field campaign, which occurred in Utah's northern Wasatch Mountains in winter 2026. Event Website