



A multiscale perspective on the dynamics and predictability of extratropical winter extremes

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As of June 2024, the U.S. experienced 391-billion-dollar weather and climate disasters, with greater than 25% ($n = 107$) of these occurring in the cold season of December–March. These events can have lasting societal and economic impacts that make diagnosing their likelihood of occurrence in the next week, season, or decade an important problem in the context of our changing climate. This talk will provide a multiscale overview of the dynamics and predictability of winter extreme weather events and highlight the role of several winter-season phenomena that can serve as predecessors to these events. The first part of the talk will highlight recent research on the variability in the high-latitude stratospheric flow and its influences on winter extreme weather. The second part of the talk will explore the role of long-lived coherent vortex features, known as tropopause polar vortices (TPVs), in the development of winter extremes, and highlight future research directions, including observational and modeling components, and explore opportunities for collaboration.

Thursday, 25 July 2024, 2:00PM

Refreshments 1:45PM

Please also join colleagues for refreshments and informal discussion after the seminar until 3:30pm

NCAR-Foothills Laboratory, 3450 Mitchell Lane
FL2-1022, Large Auditorium

Seminar will also be live webcast

<https://operations.ucar.edu/live-mmm>

Participants may ask questions during the seminar via Slido.