MMM SEMINAR SERIES

Extreme Weather in Current and Future Climates: Perspectives from Convection-Permitting Regional Climate and Global Climate Models

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The number of billion-dollar extreme weather events has been steadily increasing in the U.S. over the past 40 years. In addition, the 2020 World Economic Forum listed extreme weather events as among the top risks for global economies. Thus, it is critical to understand extreme weather events in a current climate and investigate how they may change in the future. This seminar will cover three main topics: (1) Analysis of three-dimensional storm structures and convective environments in current and future climate states using convection-permitting regional climate models over the U.S. and South America; (2) Investigation of convective storm environments and their uncertainties in global climate models using the Large Ensemble (LENS) climate simulations; and (3) A new satellite mission to constrain convective mass flux estimates from convection-permitting through global climate models. By utilizing the current suite of modeling tools and corresponding observations to investigate extreme weather events in a multiscale framework, we can learn important information about how these high-impact events may change in a warmer climate and can contribute to discussions of future global resilience and mitigation efforts.

Thursday, 2 March 2023, 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.