

MMM SEMINAR SERIES



Derechos

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NCAR, MMM

The Plains and Mid-West of the US have historically been especially vulnerable to severe convective systems that can produce extensive swaths of damaging winds. These systems, first referred to as Derechos in 1888, can affect regions up to nearly 1000 km in length, and can produce damage comparable to many landfalling hurricanes. Two particularly noteworthy events include a Derecho that extended from Chicago to Washington on 06/29/2012, producing ~3.6 billion dollars in damage, and a Derecho which extended from Iowa through Chicago on 08/10/2020, producing over 13 billion dollars in damage. More recently, a derecho swept through Ontario and Quebec on 22 May 2022, cutting power to over a million people and killing 10. An apparent increase in such Derecho activity has enhanced the interest in such phenomena, as clearly evidenced by the naming of NCAR's latest super-computer, but has also motivated questions as to the potential role of global warming in increasing the frequency of such potentially devastating events.

In this talk, I will review the historical and scientific context that helps clarify the unique environments and resulting thermodynamic and kinematic characteristics of such events and will also review some of the recent successes and challenges in predicting such events using convection allowing forecast models. Finally, I may also comment on the potential role of global warming on Derecho frequency and locations.

Thursday, 4 August 2022, 2:00pm

Refreshments 1:45pm

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.