

MMM SEMINAR SERIES



Beyond Traditional Measures: Object-Based Insights into Atmospheric Predictability

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How far into the future can we predict the weather? This study introduces a novel, object-based framework to quantify the intrinsic limits of atmospheric predictability. Using a 20-day identical-twin experiment conducted with the Model for Prediction Across Scales (MPAS) at a 4-km global resolution, we track and match precipitating systems using the Method for Object-Based Diagnostic Evaluation (MODE). In this framework, predictability loss is measured by the gradual spatial separation and decreasing overlap of matched storm pairs over time. The predictability limit is defined as the point where aggregate statistics hit a 'zero-predictability' baseline. This statistical floor, where only random-chance pairings remain, is analogous to error saturation in traditional grid-point methods... [Link to Full Abstract & Bio](#)

Thursday, 4 June 2026, 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 Seminar

Seminar will also be live webcast

<https://sundog.ucar.edu/public/page/MMM>

Participants may ask questions during the seminar via Slido.



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