



# *Tropical Cyclones and Equatorial Waves in Global Storm-Resolving Models*

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Since the inception of numerical weather and climate prediction, our models have struggled to accurately simulate the tropical atmosphere. In this talk, I will demonstrate that global storm resolving models (global models with 5 km grid spacing or less) eliminate some issues that previous models had, mostly by foregoing the need to parametrize deep convection. In particular, I will show how global storm-resolving models improve the representation of tropical cyclones and equatorial waves. This presentation will also explain why, in theory, the weather has longer predictability in the tropics than in the middle latitudes. Notwithstanding their overall positive impact, global storm-resolving models still suffer from substantial biases. A model intercomparison reveals that all participating models over-predict tropical cyclone intensity, whereas each model struggles in its own way to predict the number of cyclones in a given ocean basin.

**Thursday, 31 October 2019, 3:30 PM**  
Refreshments 3:15 PM  
NCAR-Foothills Laboratory, 3450 Mitchell Lane  
FL2-1022 Large Auditorium

*This seminar will be webcast live at:*  
<http://ucarconnect.ucar.edu/live>

*Recorded seminar link can be viewed here:*  
<https://www.mmm.ucar.edu/events/seminars>