



Understanding wind shear controls on West African MCSs using the convection-permitting MetUM

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Mesoscale Convective Systems (MCSs) play a critical role in tropical rainfall patterns and circulations. To reduce persistent biases and improve understanding of the climate system, international groups have called for unprecedented investment in global convection-permitting (CP) climate models. It is essential such models accurately represent MCSs, and in particular environmental interactions such as dynamical control by wind shear. This talk will use CP configurations of the MetUM, including novel sensitivity experiments, to explore the role of three mechanisms in the interactions of West African MCSs with shear: land-surface interactions, entrainment, and cold pools. Our results support recent findings from idealised modelling studies investigating dynamical influences on MCSs, and moreover demonstrate key tests for focused process-based assessment of the fidelity of global CP models.

Thursday, 29 August 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.