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MMM SEMINAR *NCAR*

Small-Scale Turbulent Mixing at the Top of the Planetary Boundary Layer

Juan-Pedro Mellado
Max Planck Institute for Meteorology
Hamburg, Germany

This seminar presents new insights into small-scale turbulent mixing at the boundary-layer top gained using direct numerical simulations. First we show that, under cloud-free conditions, the entrainment zone is better characterized by two length-scales rather than one. This duplicity of scales explains the observed dependence of entrainment-zone properties on weak- and strong tropospheric stratification regimes. Second, for the stratocumulus-topped boundary layer, we demonstrate that mixing enhancement by wind shear can render evaporative cooling as important as other sources of turbulence at the cloud top. This result implies that, even though its effect is indirect, wind shear must be taken into account for a correct representation of entrainment at the cloud top.

This seminar will be webcast live at:
http://www.fin.ucar.edu/it/mms/fl-live.htm

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

Thursday 4, December 2014, 3:30 PM
Refreshments 3:15 PM
NCAR-Foothills Laboratory
3450 Mitchell Lane
Bldg 2 Small Seminar Room 1022

MMM SEMINAR COORDINATORS
Rich Rotunno, 303.497.8904, rotunno@ucar.edu
Chris Snyder, 303.497.8966, chriss@ucar.edu
http://www.mmm.ucar.edu/events/seminars