MMM SEMINAR SERIES

OSSE Evaluation of Aircraft Reconnaissance Observations and their Impact on Hurricane Analyses and Forecasts

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Each year, NOAA/AOML's Hurricane Research Division (HRD) conducts its Hurricane Field Program in which observations are collected via NOAA aircraft to improve the understanding and prediction of hurricanes. Mission experiments suggest a variety of flight patterns and sampling strategies aimed towards their respective goals described by the Intensity Forecasting Experiment (IFEX; Rogers et al., BAMS, 2006, 2013), a collaborative effort among HRD, NHC, and EMC. Evaluating the potential impact of various trade-offs in design is valuable for determining the optimal air reconnaissance flight pattern for a given prospective mission. AOML's HRD has developed a system for performing regional Observing System Simulation Experiments (OSSEs) to assess the potential impact of proposed observing systems on hurricane track and intensity forecasts and analyses. This study focuses on investigating the potential impact of proposed aircraft reconnaissance observing system designs. Aircraft instrument and flight level retrievals were simulated from a regional WRF ARW Nature Run (Nolan et al., 2013) spanning 13 days, covering the life cycle of a rapidly intensifying Atlantic tropical cyclone. The aircraft trajectories are simulated in a variety of ways and are evaluated to investigate the potential impact of aircraft reconnaissance observations on hurricane track and intensity forecasts.

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

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Thursday, 25th February 2016, 3:30 PM
Refreshments 3:15 PM
NCAR-Foothills Laboratory
3450 Mitchell Lane
Bldg 2 Main Auditorium, Room 1022