



Science and Technology Seminar



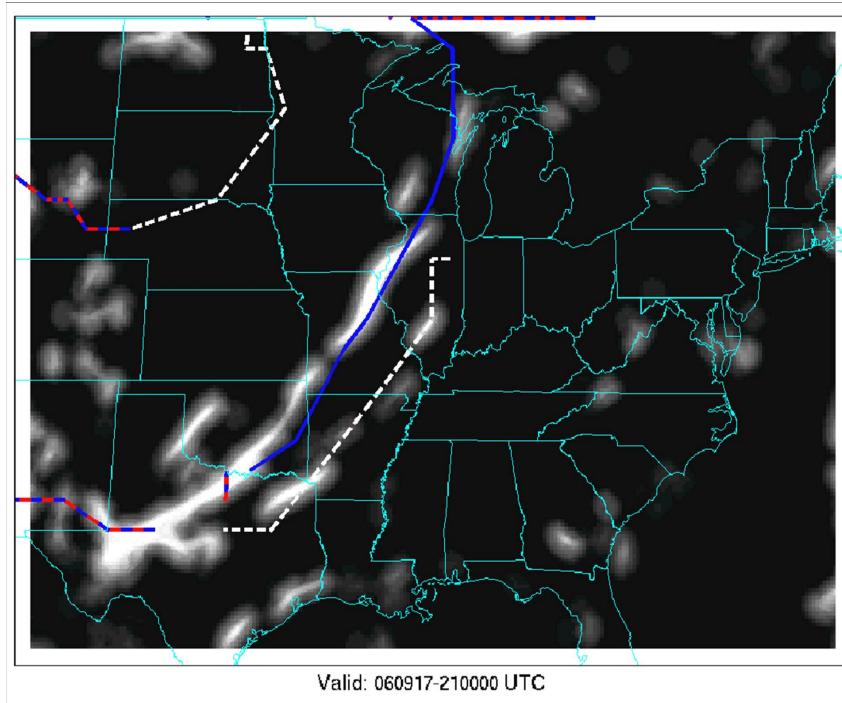
Progress on Automated Front Detection and Forecasting Convection for Aviation

Marilyn Wolfson

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How can surface boundaries which trigger convection be best detected? Dr. Marilyn Wolfson, leader of the FAA Aviation Weather Research Program's Convective Weather Product Development Team, will describe her team's recent use of NOAA ESRL GSD's STMAS (Space and Time Mesoscale Analysis System) 5-km resolution, 15-min update rate gridded surface analyses coupled with Lagrangian Scalar Integration (LSI) post-processing to produce high resolution, low latency maps of surface fronts over the eastern CONUS. The LSI step, which was developed at MIT Lincoln Laboratory, reduces noise in the gradient fields calculated from STMAS grids by integrating over time in a Lagrangian reference frame, thus exposing the coherent structures in the atmosphere.

Dr. Wolfson will describe her team's current automated front detection process and provide several examples comparing these fronts to the operational HPC fronts. She will also show how the front detections are currently used in 0-2 hr forecasts of VIL and Echo Tops in an FAA prototype called the Corridor Integrated Weather System. Furthermore, she will discuss a possible partnership with the NWS to produce improved operational CONUS front detections and predictions. Finally, Dr. Wolfson will discuss other FAA applications for this type of information and use of 1-min ASOS data.



Wednesday, April 18, 2007
2:00 - 3:00 P.M. ET
SSMC#2, Room 2358

Probability of one or more flashes on RUC analyses and lightning strike verification for 4-5 June 2004 between 1800 -2059 UTC.

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