

## **Recent Advancements in Verification within the Developmental Testbed Center**

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Robust testing and evaluation of research innovations is a critical component of the Research-to-Operations (R2O) process and is performed for NCEP by the Developmental Testbed Center (DTC). At the foundation of the DTC testing and evaluation (T&E) system is the Model Evaluation Tools (MET), which was developed at the National Center for Atmospheric Research (NCAR) and is supported to the community through the DTC. The verification team within the DTC has been working closely with DTC teams as well as the staff at National Center for Environmental Prediction (NCEP) to enhance MET to better support both internal testing and evaluation activities and testing performed in other National Oceanic and Atmospheric Administration (NOAA) testbeds (e.g. Hazardous Weather Testbed, Hydrometeorology Testbed). This presentation will demonstrate several advancements that were made available in recent release. These include ability to compute attributes necessary for quilt plots (many thresholds and radii) with one call to the Method for Object-based Diagnostic Evaluation (MODE), the extension of MODE to follow objections through time (MODE-TD), the use of Stat-Analysis for forecast revision evaluation and enhancements to facilitate exploring systematic errors in extra-tropical cyclone predictions.