Forecast, Assessment, and Social Science (FASS)

FASS research activities center around developing innovative post-processing, visualization, and verification tools for convection-allowing models (CAMs) and ensembles, as well as advancing the understanding of how forecasters use and interpret probabilistic forecast guidance derived from CAM-based forecasting systems. Many of the FASS research activities are enabled by and occur within the annual Hazardous Weather Testbed (HWT) Spring Forecasting Experiments (SFEs), which are co-led by the Storm Prediction Center (SPC) and National Severe Storms Laboratory (NSSL). These highly collaborative, 5-week-long forecasting experiments are designed to test, and accelerate into operations, emerging concepts and technologies for improving predictions of hazardous weather. In recent years, an increasingly large research focus has been directed towards the Warn-on-Forecast (WoF) project, a large research initiative aimed at increasing hazardous weather warning lead times using high-resolution, rapidly updating, 0–6 h lead time, CAM ensemble guidance. As part of this work, a prototype Warn-on-Forecast System (WOFS) has been tested during the last several SFEs. Finally, the FASS team has led development and analysis of the Community Leveraged Unified Ensemble (CLUE), which represents an unprecedented effort to leverage several academic and government research institutions to help guide NOAA's operational environmental modeling efforts at convection-allowing scales.

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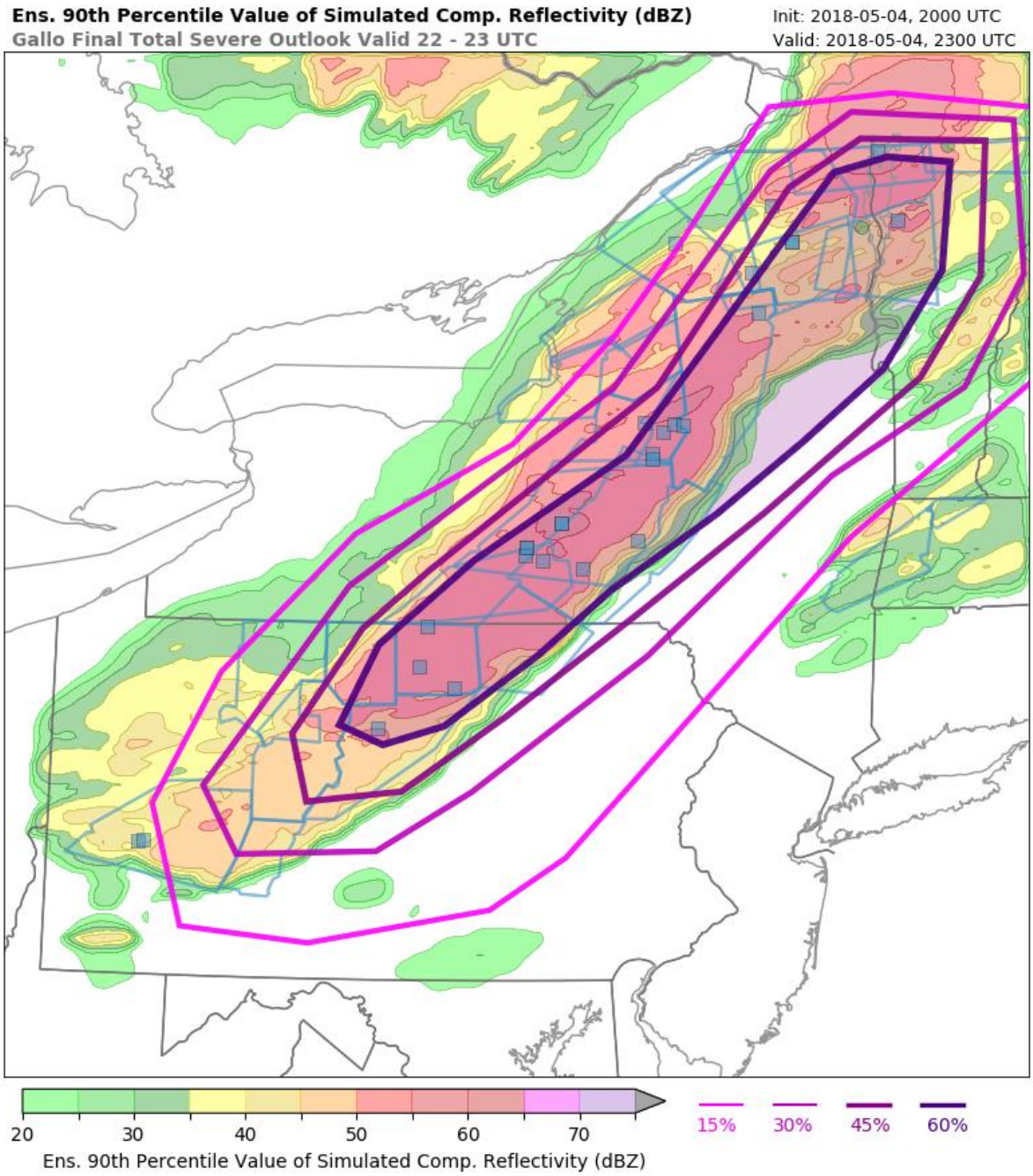
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Ens. 90th Percentile Value of Simulated Comp. Reflectivity (dBZ)