

Applying Climatological Anomalies to High Impact Events

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Forecasting high impact weather events continues to be one of the greatest challenges and one of the most valuable roles of weather forecasting. The use of climatological data and internal model climatological data with Numerical Weather Prediction (NWP) provides the ability to identify forecasts of both meteorologically and climatologically significant weather events. Significant departures from normal in the model and climate space can help identify a range of high impact weather events. The focus will be on the use of climate data coupled with numerical guidance to aid in identifying a range of high impact events. The focus for this talk will be high-impact events within the Great Lakes region. Climate forecast system and NCEP model data is compared to the 21-day centered means and standard deviations using standardized anomalies. This approach is applied to the 17-23 July 2010 flooding event in the western Great Lakes. During this event, a large subtropical ridge brought a plume of anomalously high moisture into the region during the flood episode. The anomalies in the precipitable water field showed the strong surge of moisture within the well-recognized “ring-of-fire” return flow around the subtropical ridge.