

Decision Support Tools for WFOs

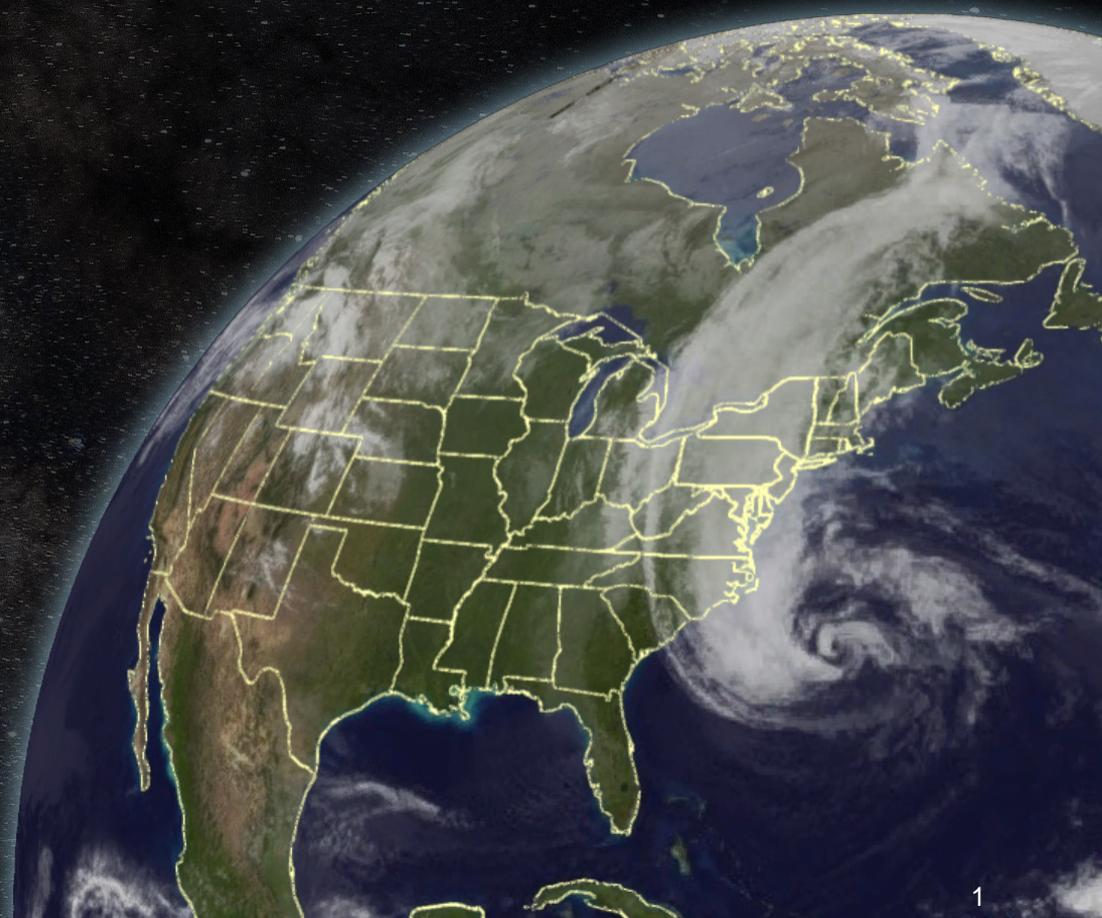
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Performing work for NOAA/ESRL/GSD



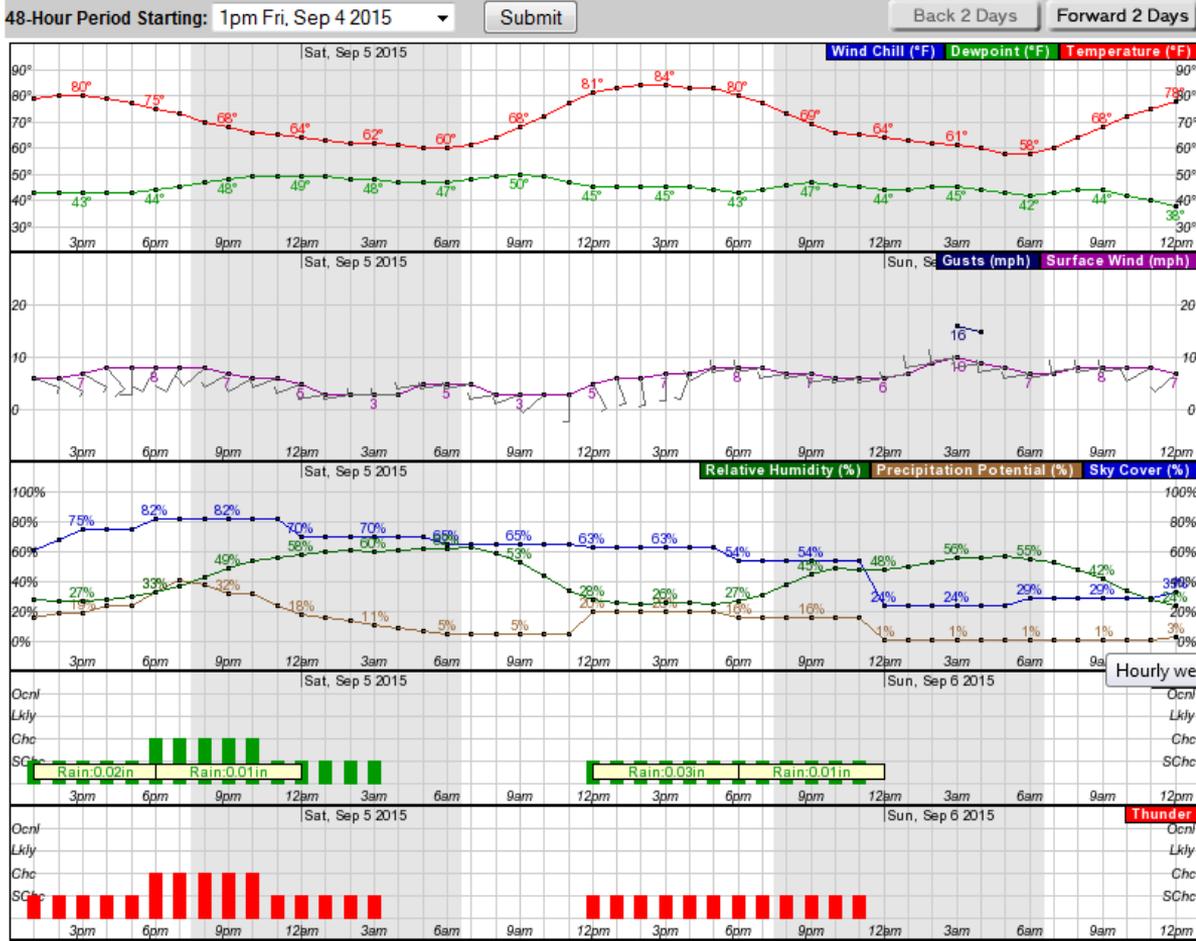
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Decision Support

Decision support starts with a point forecast from an NWS Warning and Forecast Office

Forecasts that have no error bars are “deterministic”

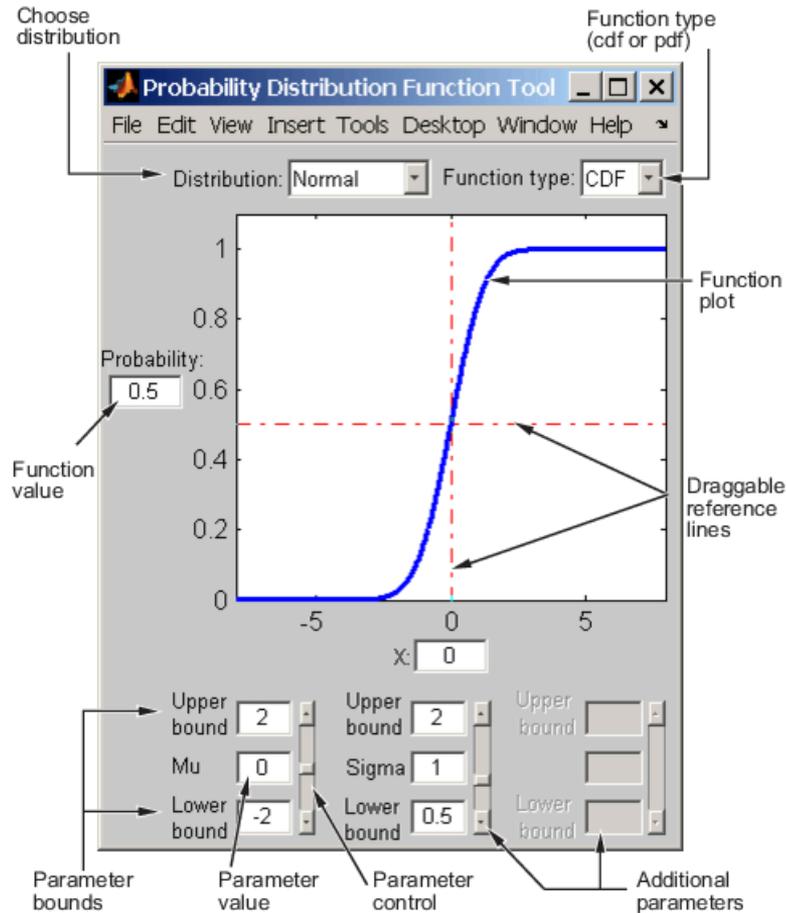


- Increasingly sophisticated users are optimizing their weather-impacted decisions by considering:
 - Event probabilities
 - Alternate scenarios
- The *Ensemble Tool* in AWIPS II was developed to help forecasters communicate this information

- 10+ forecasts from computer models
 - Any one of them could be today's best
 - Each represents an *alternative scenario*
 - *Probabilities* are estimated from the frequency of an event in the ensemble:
 - *If 6 out of 10 of the forecast models indicate precipitation in excess of 1 cm, the probability of precipitation in excess of 1 cm is about 60%*

Distribution Viewer

This example comes from MATLAB





Summary

- *Weather Ready Nation* calls for better decision support by NWS forecasters
- Decision support = communicating forecasts *and their uncertainty*
- Uncertainty = probabilities and/or alternative scenarios
- Poster gives examples of how the Ensemble Tool enables this