

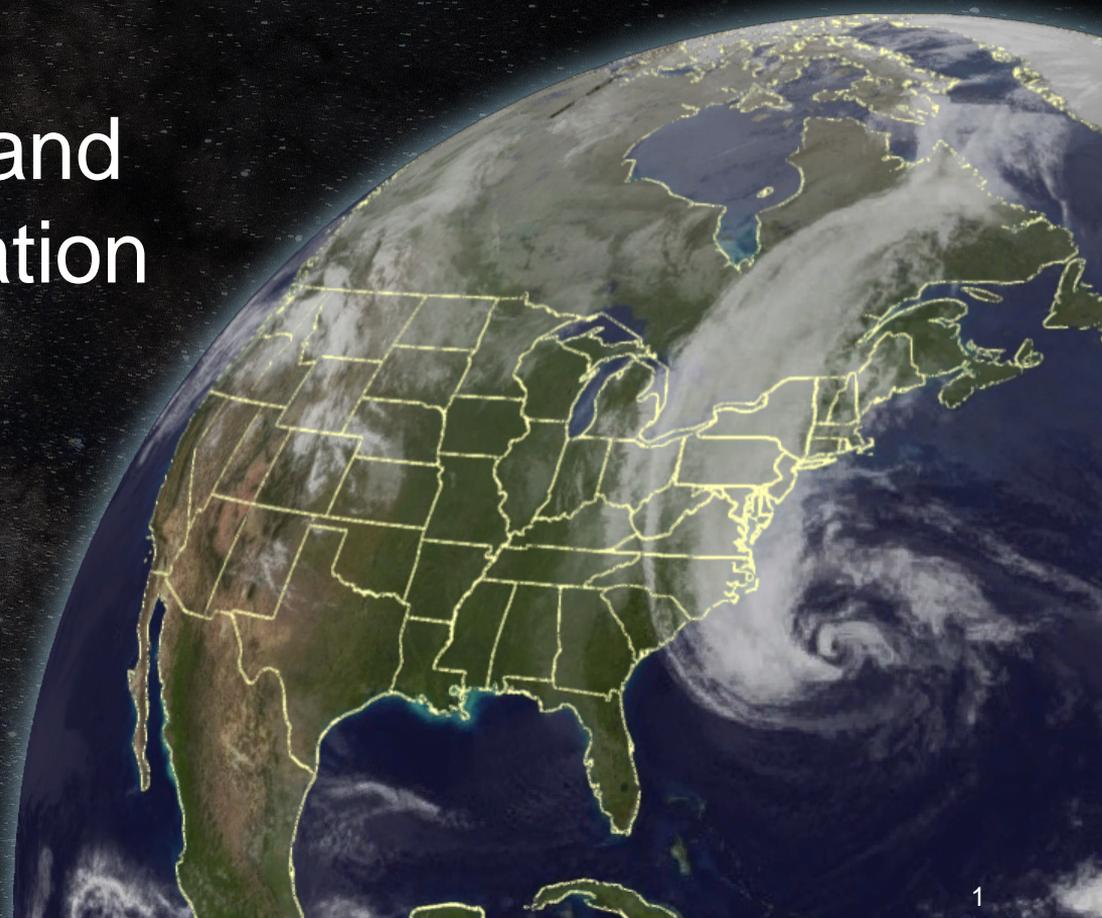
Decision Support and Evaluation for Aviation

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NOAA/ESRL/GSD



GSD Science Review
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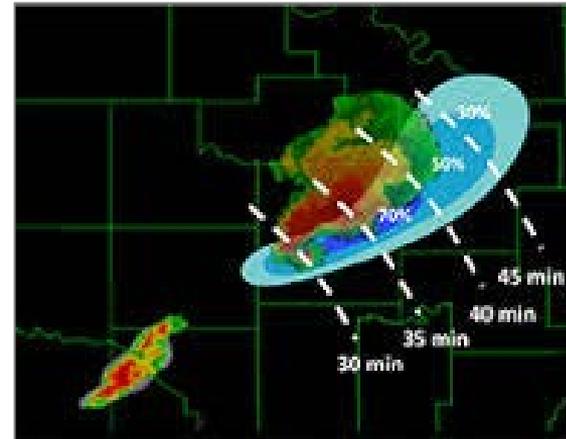
History of GSD's Aviation Program

- Model product development team
- Aviation impact variable (AIV) algorithms
- Algorithm quality assessment (QA)
- New QA product development team formed
- NWS in NextGen - support for the forecaster
- Translation of weather forecasts into impacts



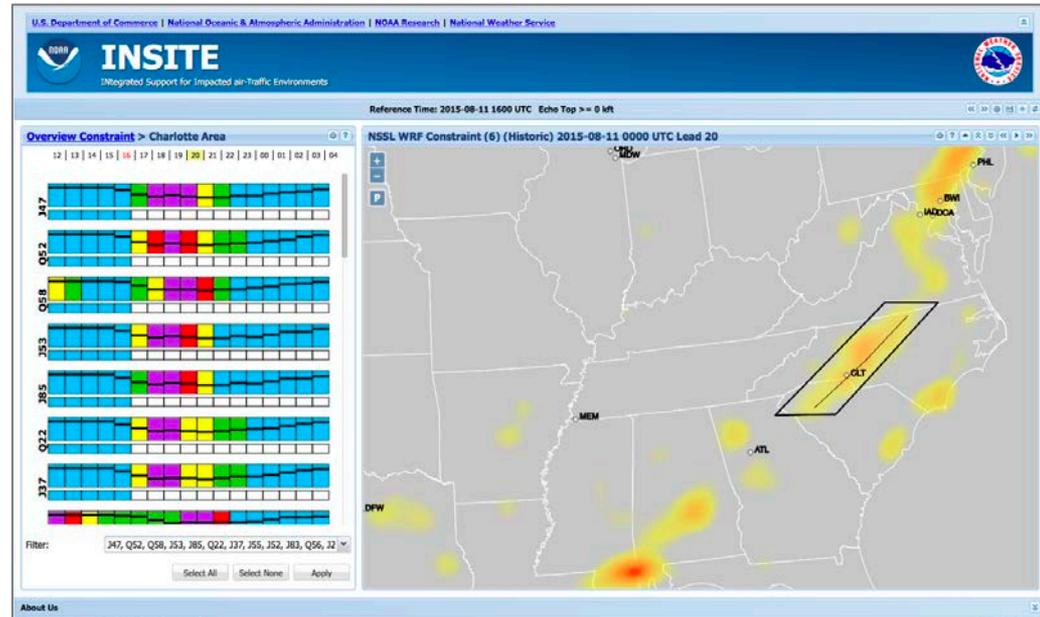
Introduction to Session 5

- AWIPS and aviation
- Quantitative verification and impact evaluation
- Focus on event-driven assessments
- Enhance the utility of aviation forecast tools
- Help decision makers utilize uncertainty and probability



Our story

- Assess Aviation Impact Variable (AIV) algorithms
- Understand weather impact on aviation operations, and criteria used by decision makers
- Evolved into development of tools to identify potential weather related impacts



Current QA Research

- Evaluation of AIV algorithms requires new methodologies
- Requires new ways to establish “truth”
- 25 years of experience

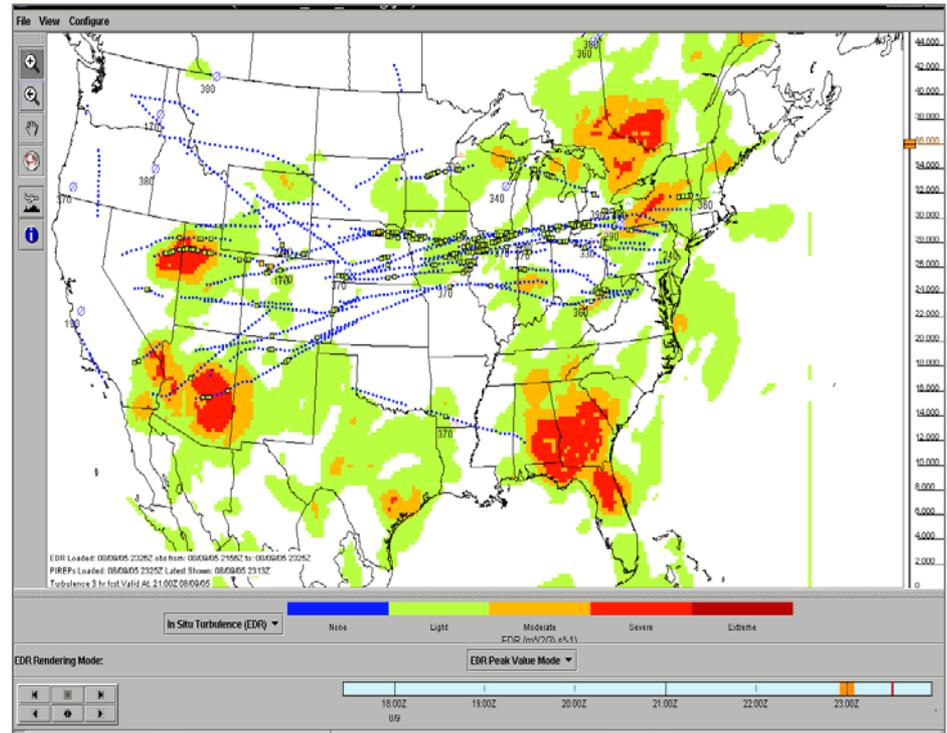


- **Publications** - 9 assessment reports
- **Methodology** is reviewed by stakeholders and developers
 - Invited presentations
- **Assessments** inform decisions on transition of algorithms to operations
- **Expertise** used to develop tools that translate forecasts into impact information

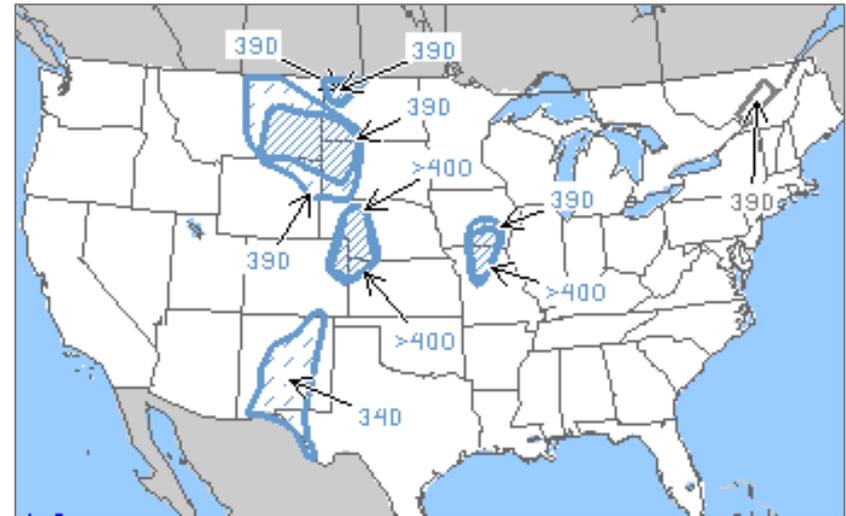


Performance

- Leadership role in conducting assessments
 - GSD is sought out
- Driven by sponsor needs and requirements
- Success gauged by:
 - Satisfaction
 - Effect on operational implementation
 - Continued support



- **Weather-Ready Nation:** Society is prepared for and responds to weather-related events
- **Objective:** Reduced loss of life, property, and disruption from high-impact events



Decision support and evaluation for aviation



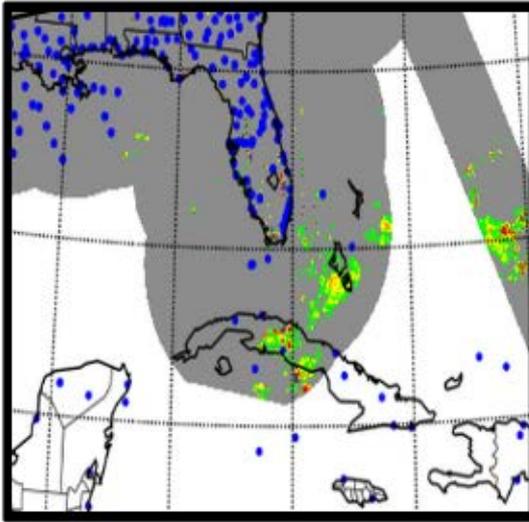
To Be Continued...

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**Aviation
Forecasting with
AWIPS
(Woody Roberts)**

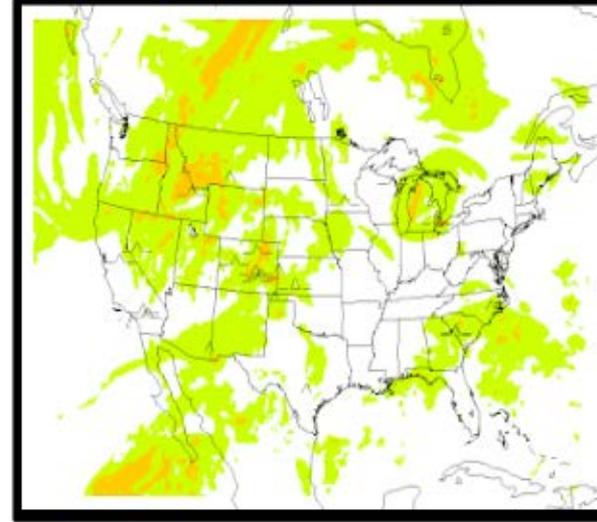
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**Impact-based
Decision Support
for Aviation
(Brian Etherton)**

↑
**Verification Tools
for Aviation
Weather
(Missy Petty)**

Decision support and evaluation for aviation



Investigation of
Truth Sets for
Verification
(Laura Paulik)



Assessment of Aviation
Algorithms and
Forecast Technologies
(Matt Wandishin)



Presenter	Poster Station
Woody Roberts Aviation Forecasting with AWIPS	1
Brian Etherton Impact-based Decision Support for Aviation	2
Missy Petty Verification Tools for Aviation Weather	3
Laura Paulik Investigation of Truth Sets for Verification	4
Matt Wandishin Assessment of Aviation Algorithms and Forecast Technologies	5