Verification Tools for Aviation Weather

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GTG3.0 vs GTG2.5 - Winter

While most of what is new in GTG3 involves extensions to GTG2.5, it is still useful to compare the two algorithms where possible.

To that end, the various statistical plots below provide a comparison of the performance of the two products for the winter period 01/01/2013 - 03/31/2013.

Figure 1 - 2013 Thresholds PIREP (Click on image for options)

Accuracy (POD and PODF) and skill (FSS) for each algorithm as a function of forecast lead time, verified PIREPs.

Figure 2 - 2013 Thresholds EDR (Click on image for options)

Accuracy (POD and PODF) and skill (FSS) for each algorithm as a function of forecast lead time, verified in situ EDR data.
• Performance in an aviation context
• Monitor product performance
• Support in-depth analysis
• Provide feedback to product developers
Technical Challenges

- Verification Processing
- Intermediate Verification Data
- Web-based applications

- Forecasts
- Observations

Locations:
- FIQAS Analyst, Boulder, CO
- NWS CWSU, Nashua, NH
- NWS HQ, Silver Spring, MD
- FAA, Washington, DC

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• Our verification tools provide capabilities for ongoing monitoring and assessment of product quality in an operational context

• Support management decisions and provide feedback to forecasters/developers

• Future direction
  – Additional weather variables and verification techniques
  – Transition to NWS operations