NCEP - Aviation Weather Center

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Operational Unified Post Processor

Experimental Graphical Forecasts for Aviation - Turbulence
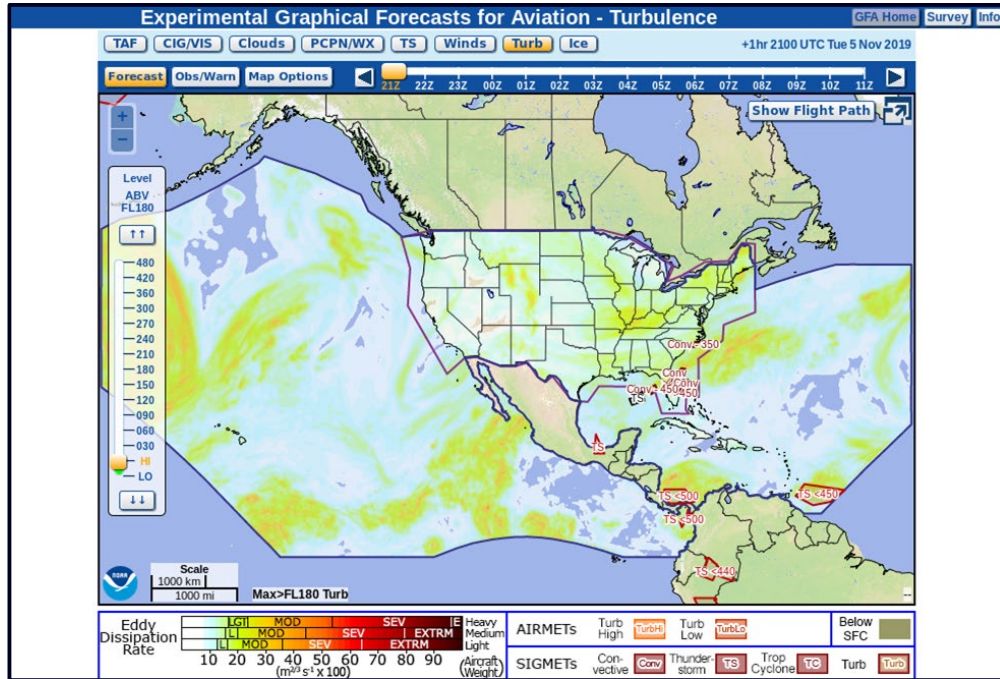
- **Current Efforts**
  - **In collaboration with EMC, Integration of aviation hazard algorithms onto UPP**
  - **Full Global and Domestic GTG Production handled by UPP**
- **Future Needs**
  - **Aviation algorithms need to be model/scale agnostic**
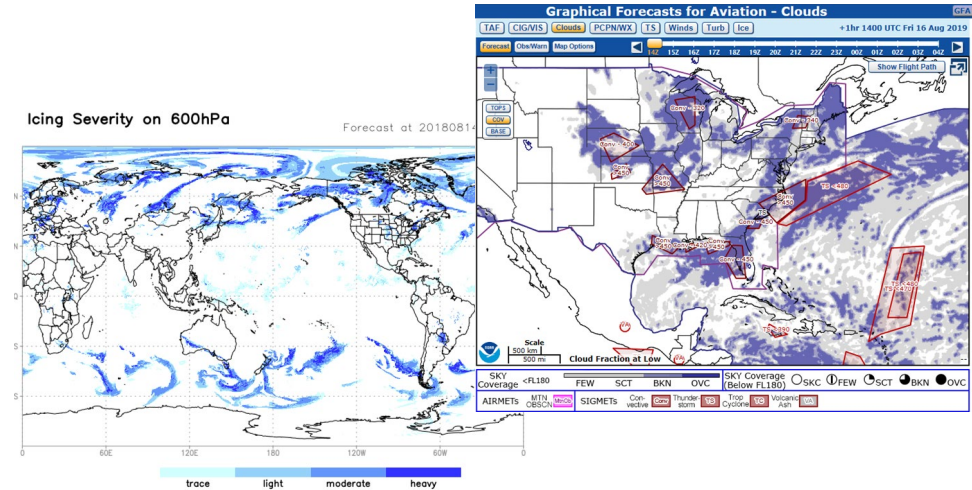 - **Must be efficient to not slow down post-processing**
  - **Output needs to meet the needs of aviation partners**

CAMS/High Res Ensembles

- **CAM Benefits**

  - Improved cloud forecasting (cloud fraction on native model layers)
  - Improved icing forecasts
  - Support Auto Traffic Flow Management Convective Forecast (TCF)

High Resolution Ensembles (F00-F96)
- **Support current and future decision support tools**
  - Expand forecast valid time horizon for Graphical Forecasts for Aviation, and Digital Aviation Services, etc.
  - Maintain and upgrade capability of operational Aviation Winter Weather Dashboard, Extended TCF and extended TCF products
    - Increasing emphasis on communication hazards at an extended range (48-96 hrs)
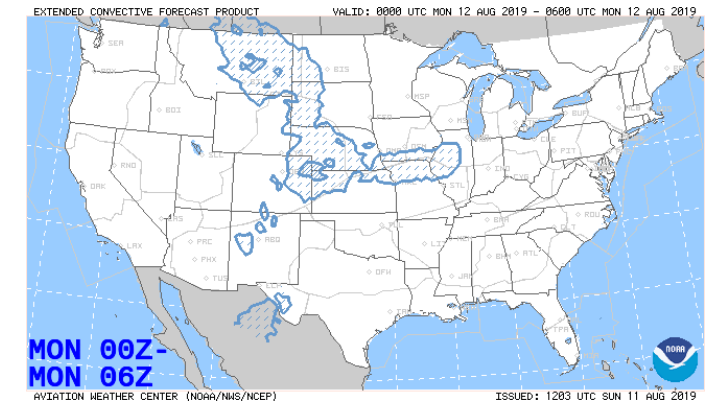
Global

- **Global Resolution Ensembles (through day 12)**
  - Probabilistic Turbulence, Icing, and Convection on global ensemble
  - Explore assorted decision support tools to be evaluated in AWT in collaboration with FAA
- **WAFC**
  - By 2024:
    - GEFS and MOGREPS blending of aviation en-route variables
  - Limited spread in early forecast hours still a concern
  - Potential for multi-ensemble
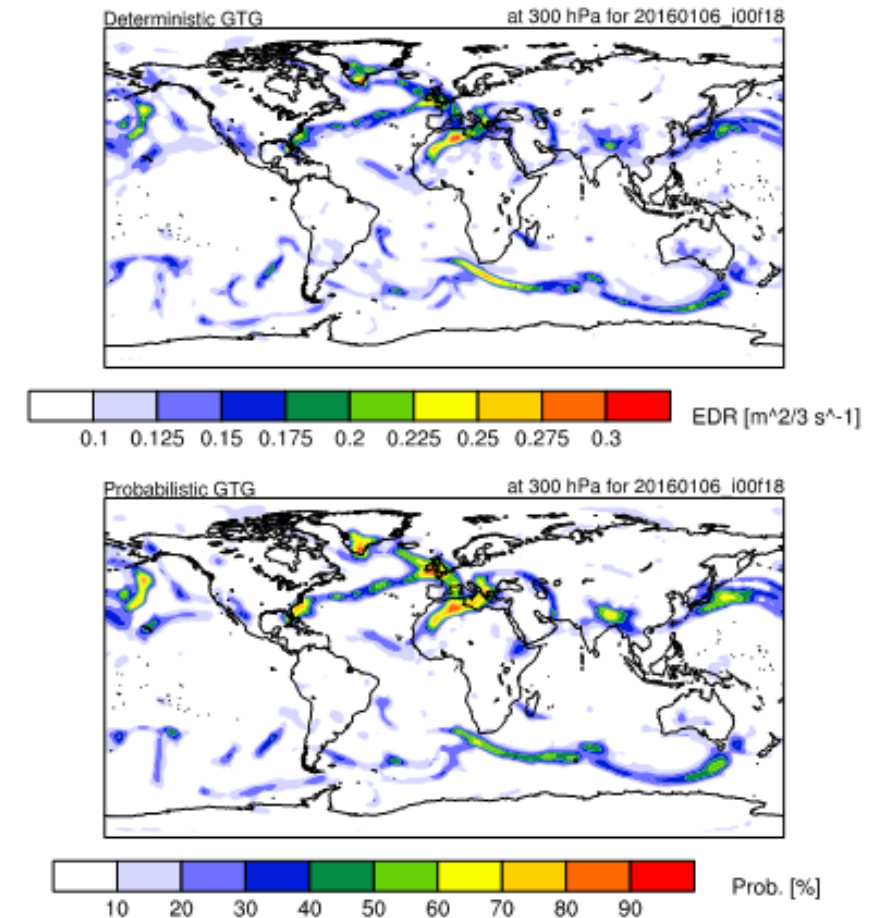
Questions

Aviation Weather Center
www.aviationweather.gov