MADIS &
Winds, Wind Shift, Wind Shear

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MADIS
Meteorological Assimilation Data Ingest System

- **Operational Data Ingest System for the NWS Rapid Update Model (24 x 7 system)**
- **Assimilates data from many surface systems**
- **Automatic Data Quality Analysis**
  - **Simple Bounds Check (Sanity Check)**
  - **Consistency Checks**
    - **Temporal Consistency**
    - **Spatial Consistency**
    - **Derived Parameter analysis**
  - **Maintains data failure statistics (maintenance issues)**
- **New data systems are being added**

Thoughts

- **Possible Enhancements**
  - **Climatological Bounds Checking adjusted for season and time-of-day**
  - **More consistency checking**
    - **Fog and Cig vs. T-Td**
- **Run off-line to detect chronic problems**
  - **New data systems**
  - **Regular review of existing data systems**
  - **Winds siting analysis**

Winds, Wind Shift, & Wind Shear

- **50% of GA accidents involve Wind, etc.**
- **ITWS FAA system**
  - Currently available wind products
  - Gridded Winds, Wind Shift, Wind Shear
  - 5 minute, 2 km grid, 100 km about airport
  - 45 major airports
- **Could have**
  - Turbulence in Urban Canyons
  - Wind shifts from Convective Weather analysis
- **How important is this?**