Aviation Weather Center HEMS Tool
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NWS/NCEP
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Kansas City MO

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HEMS Tool
## Helicopter and Emergency Medical

- 2000s - Java Application
  - Developed by NCAR
  - Hosted on weather.aero website

- Hosting at aviationweather.gov
  - Issues with Java support and security
  - Looking to support mobile devices

- 2013 - Development of new aviationweather website
  - New layout based on weather.gov
  - New web services to support data requests
    - WMS/WFS
    - Tilecache
    - GeoJSON
  - Adoption of OpenLayers Javascript API for interactive applications to support mobile devices

- 2014 - OpenLayers version of HEMS
  - Mimics Java user interface
  - Same data as Java version

- Operational since May 2015
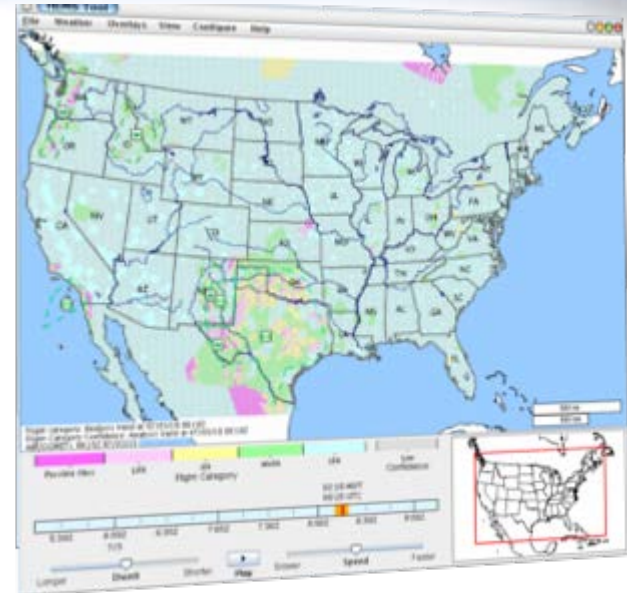
HEMS Tool
Helicopter and Emergency Medical

- Data contours/imagery
  - Global composite satellite
  - MRMS radar (RALA)
  - Flight category, ceiling, visibility From NCVA (Ceiling and Visibility Analysis)
  - Icing from CIP and FIP (Current and Forecast Icing Product)
  - RAP temperature, relative humidity and wind speed
  - Data on 1000' increments AGL

- Data overlays
  - METARs
  - PIREPs
  - SIGMETs
  - G-AIRMETs
  - CWA (Center Weather Adv)
  - NWS Hazards (watches, warnings)
  - RAP wind barbs

- Navigational overlays
  - Roads, counties
  - Navigation aids (VORs, NDBs)
 - Airports, heliports, seaplane bases
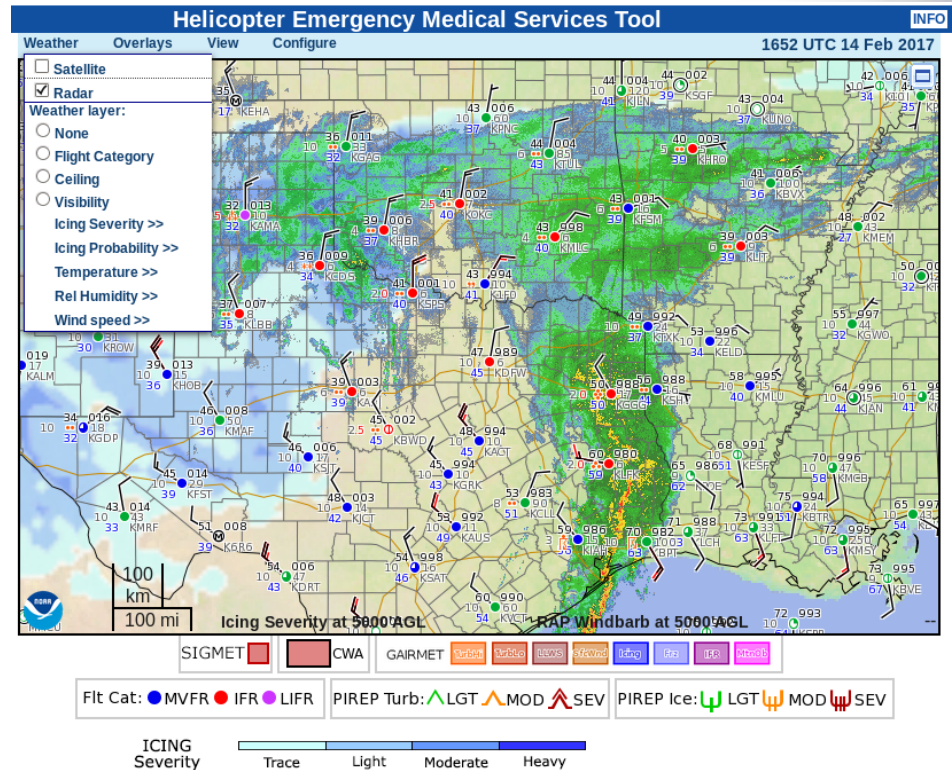
URL: www.AviationWeather.gov/hemst

Testbed HEMS

Observations

- METARs
  - Surface observations from airports
  - Internationally approved
  - High quality and reliability

- Meteorological Assimilation and Data Ingest System (MADIS)
  - Additional surface observations
  - Lack of ceiling and visibility observations but temperature and dewpoint useful
 - Reliability and accuracy issues
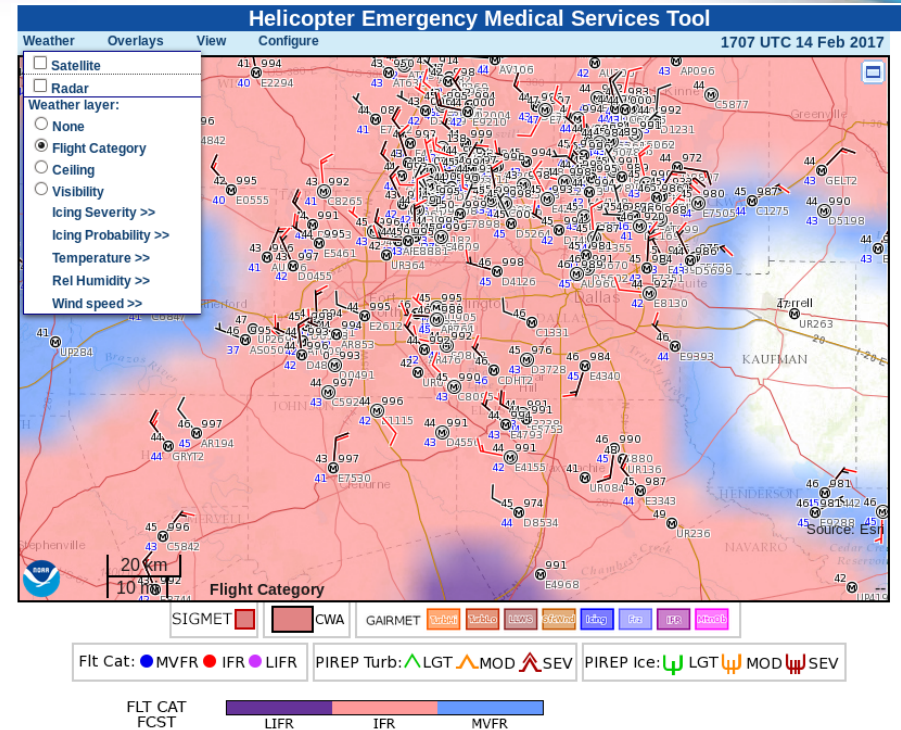
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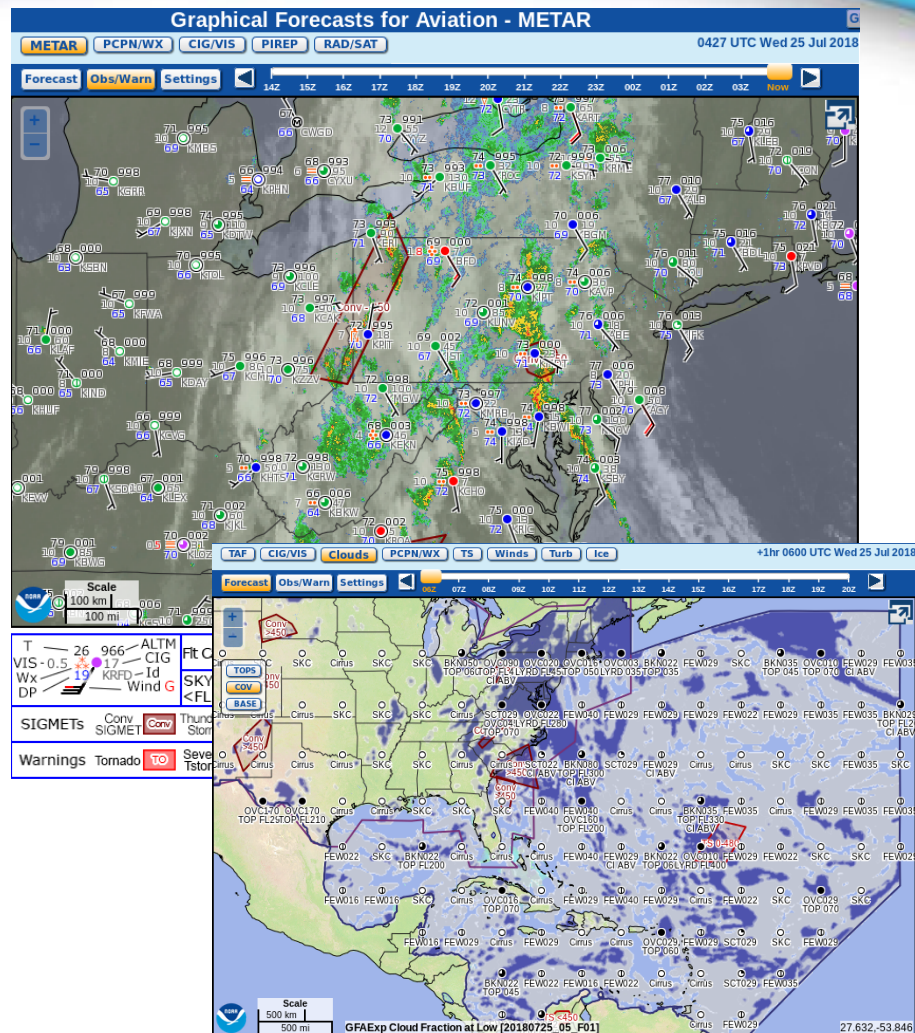
Testbed HEMS

Ceiling and Visibility

- Operations using National Ceiling & Visibility Analysis (NCVA)
  - Based on observations
  - Will be going away in 2019

- Testbed using Real-Time Mesoscale Analysis (RTMA)
  - High resolution analysis initialized from model data
  - Updated every 15 minutes
  - Larger domain including oceans

- Forecasts using Gridded Localized Aviation MOS Product (G-LAMP)
  - Provides short to medium term forecasts
  - Model based but only over CONUS
  - Provides guidance in data poor areas
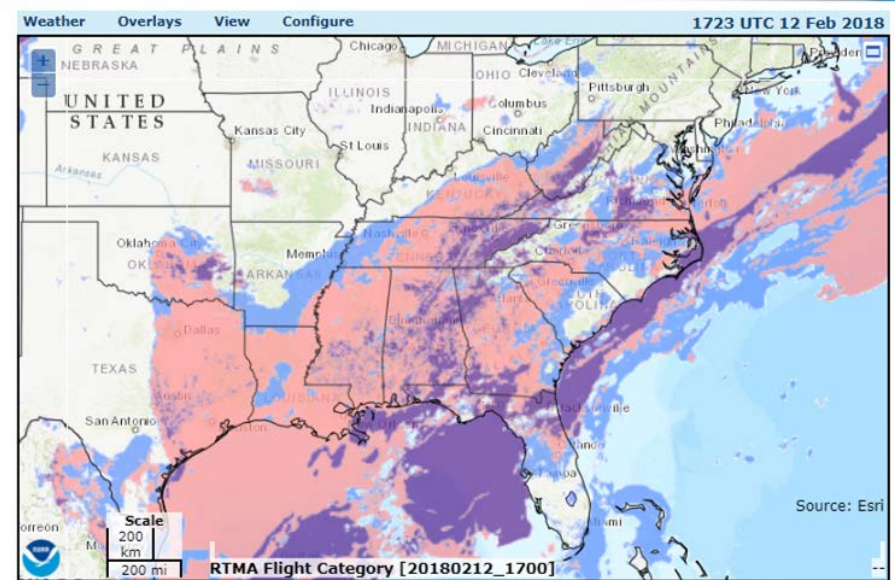
Upcoming for HEMS

- New name
  - Helicopter Air Ambulance Tool
  - Low Altitude Aviation Tool

- New user interface, new data
  - Based on GFA Tool ??
  - Adding in data from GFA ??

HEMS Tool Update

Questions?