



# ADDs and PIREPs

Alaska Aviation Weather Workshop  
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NWS/NCEP  
Aviation Weather Center  
Kansas City MO



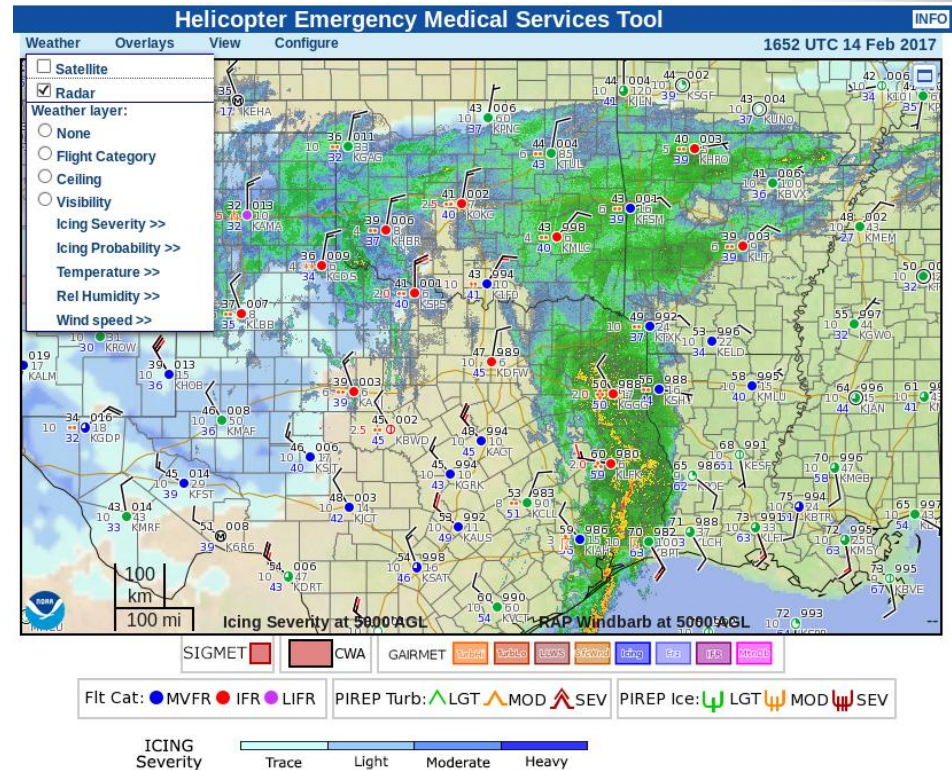
# Aviation Digital Data Service

- Late 1990s - NCAR ADDS
  - Basic aviation graphics for Contiguous US (Icing, Turbulence, Winds, Satellite)
  - Access to raw meteorological data (METARs, TAFs, PIREPs) via MySQL database
- 2003 - ADDS moves to AWC
  - Creation of [www.aviationweather.gov](http://www.aviationweather.gov) website
  - Stable production code on 24x7 maintained servers
  - Addition of AWC related products: International Sig Wx graphics, CCFP/TCF, Flight folder
  - NCAR development of Java applications: Dataserver, Flight Path Tool
- 2013-15 - Development of new AWC website
  - Rework to support common look and feel and common user experience
  - Addition of GIS and OGC tools including OpenLayers interactive displays
    - WMS, GeoJSON, Tilecache
    - New interactive tools: HEMS, GFA
  - Expansion of graphics and services beyond CONUS
  - Move to NWS Integrated Dissemination Program (IDP) web services

# HEMS Tool

## Helicopter and Emergency Medical

- Operational since May 2015
- Data 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
  - RAP wind barbs



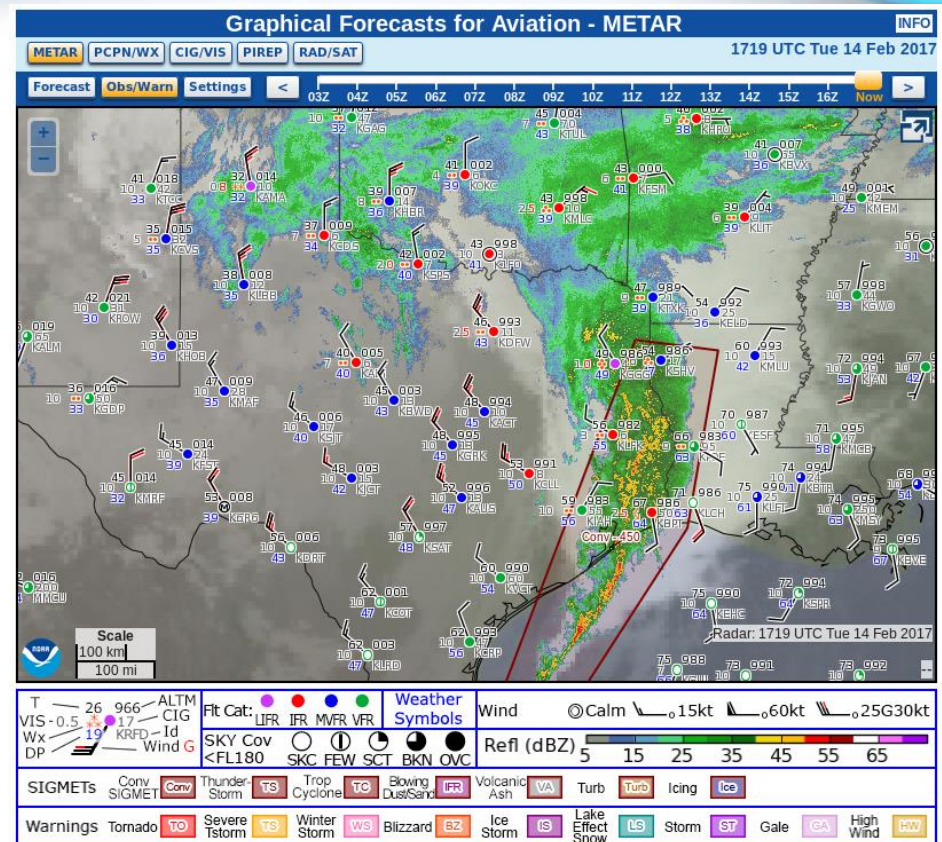
URL: [www.aviationweather.gov/hemst](http://www.aviationweather.gov/hemst)



# Graphical Forecast for Aviation

## ● GFA Tool

- New user interface, more intuitive
- Access to much more data
- Data imagery
  - Satellite and Radar
  - RAP model data
  - LAMP Ceiling and Visibility
  - NDFD Precipitation and Convection
  - RAP Cloud Layers
- Data overlays
  - METARs
  - PIREPs
  - SIGMETs, G-AIRMETs
  - More navigation data
- Future
  - Flight path information
  - Cross sectional graphics



URL: [www.aviationweather.gov/gfa](http://www.aviationweather.gov/gfa)

# PIREP Submit Tool

## PIREP Submission

- FAA wanted additional ways to get pilot reports into weather data stream
- 2010 - AWC implements PIREP submit tool
- 2015 - AWC expands use of tool to all registered pilots
- Current users:
  - Airline dispatchers
  - Air traffic controllers/CWSUs
  - Private pilots

The screenshot shows the PIREP Submit Tool interface with the following sections:

- 10. /TB (Turbulence):** Includes dropdowns for Frequency (Not Reported, Occasional, Intermittent, Continuous), Intensity (Not Reported, Negative, Light, Moderate, Severe, Extreme), Type (Not Reported, CAT, Chop), and Altitude(s).
- 11. /IC (Icing):** Includes dropdowns for Intensity (Not Reported, Negative, Trace, Light, Moderate, Severe) and Type (Not Reported, Clear, Rime, Mixed), along with an Altitude(s) field.
- 12. /RM (Remarks):** A large text area for additional remarks.

Buttons for "Encode" and "Reset" are located at the bottom of the form.

## PIREP Entry Form

This is an updated PIREP Entry page.  
Please refer to the Info page for more information.

Items 1 through 5 are mandatory for all PIREPs

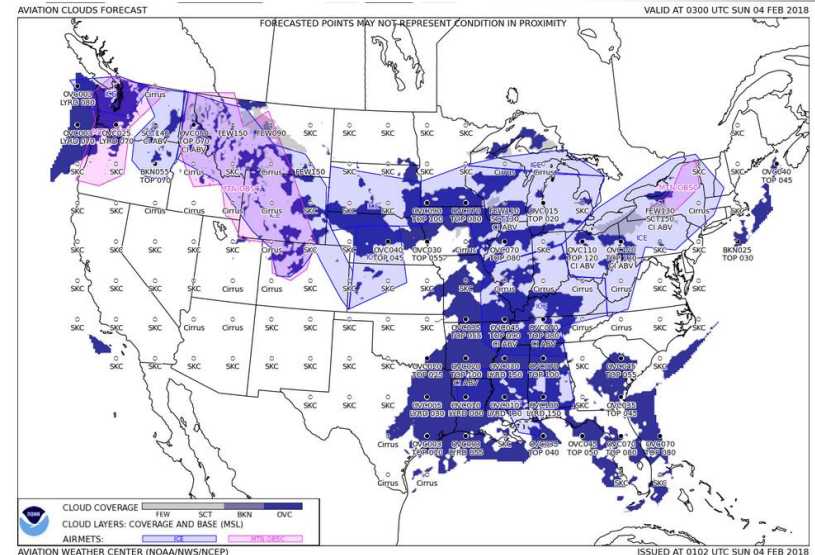
The screenshot shows the PIREP Entry Form with the following sections:

- 1. /OV (Origin):** Includes radio buttons for UA (Routine Report) and UUA (Urgent Report). It has buttons for "Enter Lat/Lon" and "Enter NAVAID". Below these are fields for GPS Intersection/VOR/Airport (KMCI), Bearing from VOR/Airport (300), and Distance from VOR/Airport (030). It also includes a "Location:" section with fields for KMC1300030, KANSAS CITY/KANSAS CITY INTL, and Weather reporting station: KMCI, Kansas City Intl. There are "Select" buttons for VOR, Airport, and Lat Lon.
- 3. /TM (Time):** Includes fields for Local (optional) and UTC (required) time. It has a "Current UTC Time" button and a note: "4 digits UTC e.g. 0915, 2330".
- 4. /FL (Altitude/Flight Level):** Includes a field for Altitude/Flight Level (030) and radio buttons for climb, level, and descent. It has a note: "3 digits in hundreds of feet MSL. e.g. 095 = 9500 ft MSL; 210 = FL210 or 21,000 ft MSL. Select climb, level or descent if applicable."

URL: [www.aviationweather.gov/pirep/submit](http://www.aviationweather.gov/pirep/submit)

# Challenges Moving Forward

- Better OCONUS products
  - Expanding PIREPs and AIREPs
  - International SIGMETs - supporting all formats
  - Global products for icing, turbulence, clouds
- Better cloud and visibility products
  - 3D clouds
  - Enhanced ceiling and visibility especially in mountainous and oceanic areas
- Better observations
  - MADIS surface networks
  - Buoy and CMAN data in oceans
  - More PIREPs
- GOES-16/17 Products
  - Aviation related post-processed data such as probability of IFR
  - GLM lightning product
- Expanded forecast times
  - Out to 30 hours and beyond
- Archive Capabilities
  - 15 days and beyond





# Contact

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# **ADDS and PIREPs**

**Questions?**