Product Description Document
Aviation Surface Forecast and Aviation Cloud Forecast Graphics

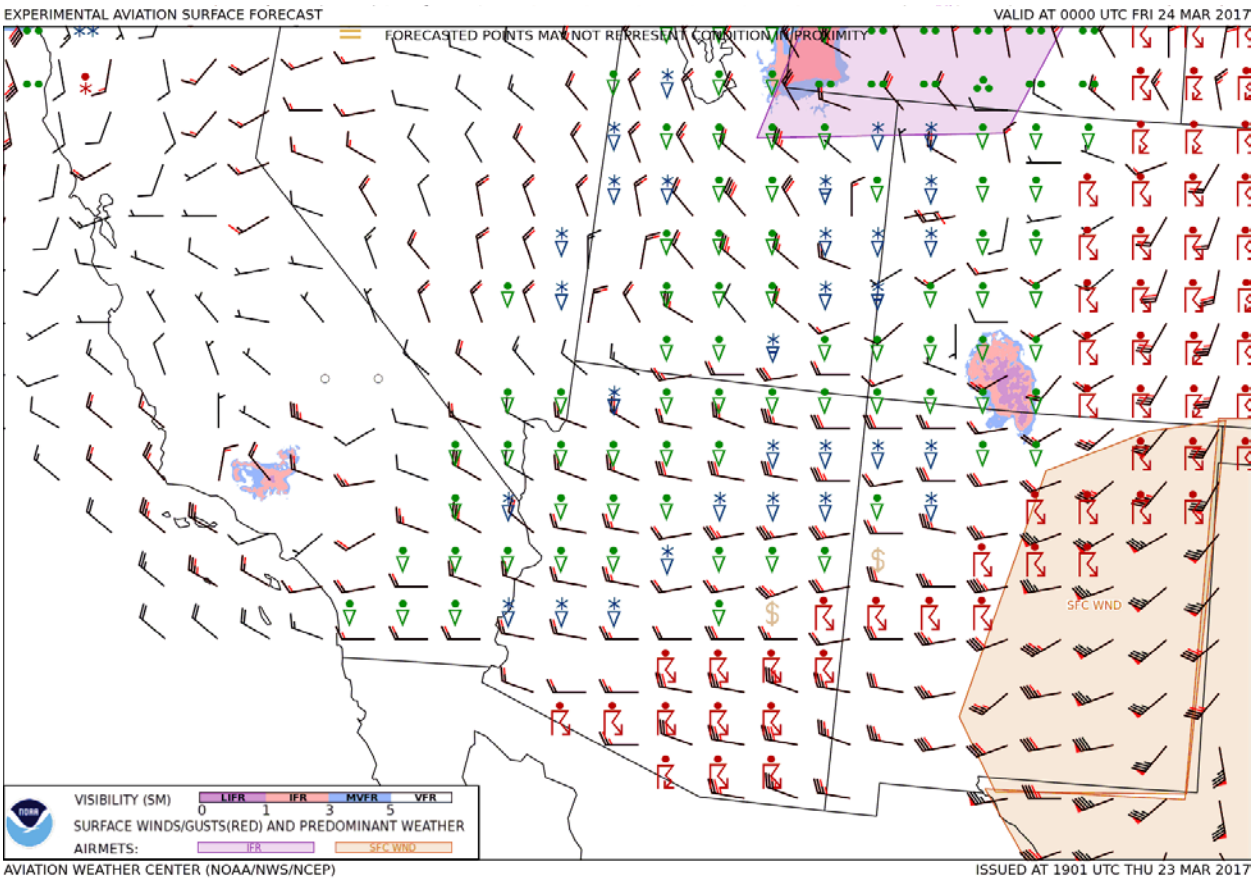
Part 1 – Mission Connection

1. Product Description: The Aviation Surface Forecast and Aviation Cloud Forecast graphics are snapshot images derived from a subset of the aviation weather forecasts valid for the continental United States (CONUS) and coastal waters used within the Graphical Forecasts for Aviation interactive web-based display. The Aviation Surface Forecast graphics display surface visibility with overlays of surface wind and gusts, predominant precipitation type (i.e., rain, snow, mix, ice, or thunderstorm) coincident with any cloud, and predominant weather type (i.e., haze, fog, smoke, blowing dust/sand). Graphical Airmen's Meteorological Information (AIRMETs) for Instrument Flight Rules (IFR) and Strong Surface Wind are overlaid. The Aviation Cloud Forecast graphics display cloud coverage fraction (few/scattered, broken, overcast) for clouds with bases below Flight Level 180 (FL180 - 18,000 feet above Mean Sea Level (MSL)). Text overlays indicate cloud coverage and height in feet above MSL at that particular location. Clouds above FL180 are indicated as Cirrus or CI above. Graphical AIRMETs for Mountain Obscuration and Icing are overlaid. Forecasted points may not represent conditions in proximity.

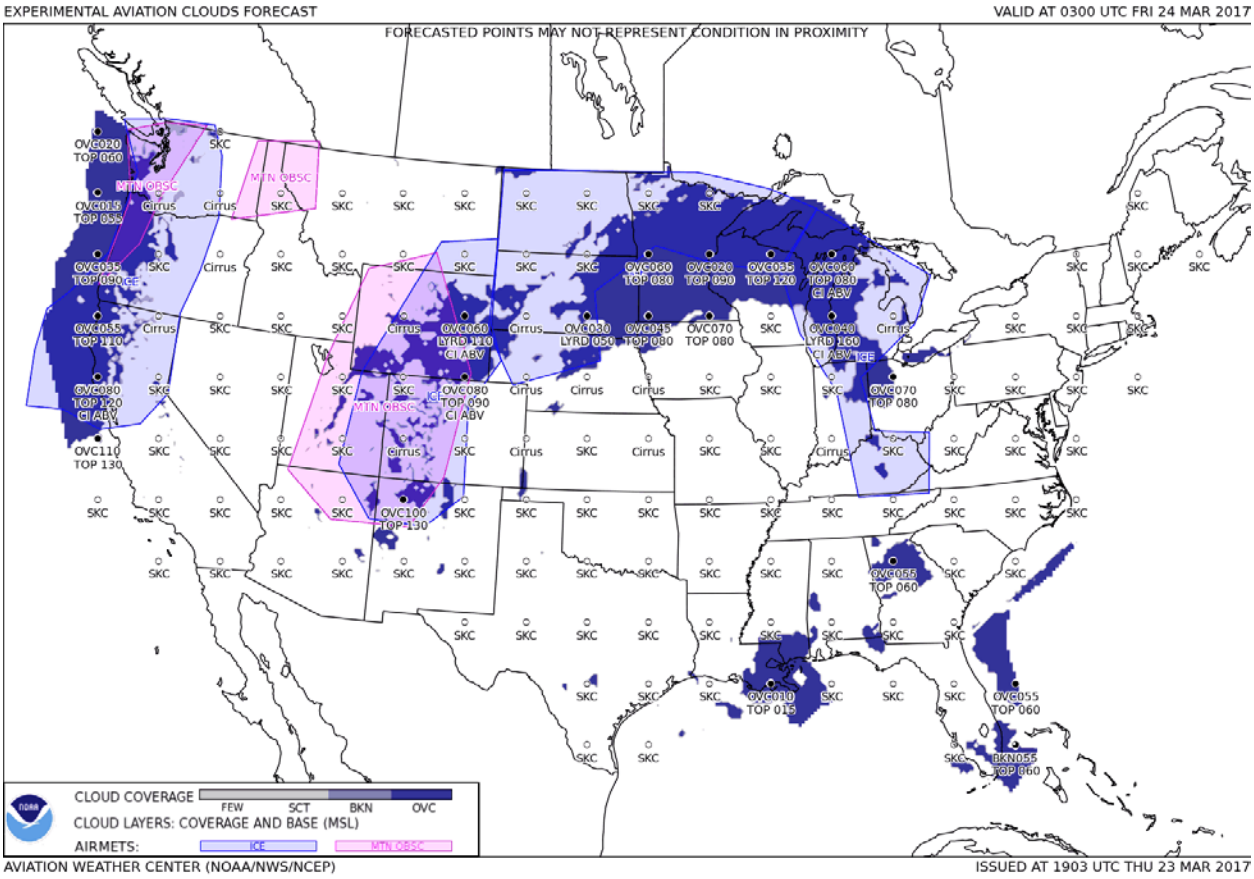
2. Purpose/Intended Use: Pursuant to Title 49 United States Code Section 44720, the Experimental Aviation Surface Forecast and Aviation Cloud Forecast graphics are produced based on Federal Aviation Administration (FAA) requirements for this weather information and service and are necessary for the safe and efficient conduct of operations in the National Airspace System (NAS). These graphics provide a low-bandwidth alternative to Graphical Forecasts for Aviation interactive web-based display and are provided through NOAAPORT/Satellite Broadcast Network.

3. Audience/Users: The static images are intended for FAA Flight Service Station providers, commercial and General Aviation pilots, operators, briefers and dispatchers with limited Internet access.

4. Presentation Format:



The above example shows the Aviation Surface Forecast graphic for the Southwest United States. Forecasted surface visibility is contoured for Low IFR (0-1 statute miles), IFR (1-3 statute miles), and Marginal VFR (3-5 statute miles) conditions. Visibilities in excess of 5 statute miles are not shown. Winds are depicted with a standard wind barb with red coloring indicating gusts. Descriptions of the precipitation and weather symbology can be found at http://www.AviationWeather.gov/metar/symbol. Graphical AIRMETs for Instrument Flight Rules (IFR) and Strong Surface Winds are overlaid.



The above example shows the Aviation Cloud Forecast graphic for the Continental United States. Forecasted cloud coverage is contoured for few and scattered clouds, broken clouds, and overcast clouds. The fraction of the fill of the circle at the forecasted points depicts sky cloud coverage. Clear skies are annotated as SKC. Clouds above FL180 are indicated as cirrus. The bases below FL180 of FEW/SCT, BKN, and OVC clouds are labeled. The tops of the highest BKN or OVC layer with bases below FL180 is labelled. When multiple layers of BKN or OVC clouds exist, the top of the highest layer will be given preceded by LYRD. Cirrus clouds above clouds with bases below FL180 are labelled as CI ABV. Graphical AIRMETs for Icing and Mountain Obscuration are overlaid.

5. Feedback Method: For further information or to provide feedback, please contact:

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Part 2 – Technical Description

1. Format and Science Basis: The static images are provided in Portable Network Graphic (png) format. The imagery is based on best available operational sources of National Weather Service (NWS) produced weather information.

2. Availability: The Experimental Aviation Surface Forecast and Aviation Cloud Forecast Graphics images are provided every three hours for one CONUS projection and nine regional projections with three-hourly forecasts of Surface (predominant weather, visibility, wind) and cloud coverage and layer (bases and tops) information out to 18 hours. These graphics will be available over NOAAPORT/Satellite Broadcast Network. World Meteorological Organization header information will be as follows:

T1T2A1A2ii CCCC
- CCCC is KKCI (Aviation Weather Center)
- T1 = Q (Regional Static Graphic)
- T2 specifies the forecast graphic as follows:
  = I for the Aviation Clouds Forecast Graphic
  = Z for the Aviation Surface Forecast Graphic
- A1 = T (Northern Hemisphere)
- A2 specifies the forecast time as follows:
  = B for the 3 hour forecast
  = C for the 6 hour forecast
  = D for the 9 hour forecast
  = E for the 12 hour forecast
  = F for the 15 hour forecast
  = G for the 18 hour forecast
- When T2 = I, ii specifies the regional domain of the Aviation Clouds Forecast Graphic as follows:
  = 00 for Continental United States
  = 01 for Northeastern United States
  = 02 for Eastern United States
  = 03 for Southeastern United States
  = 04 for North Central United States
  = 05 for Central United States
  = 06 for South Central United States
  = 07 for Northwestern United States
  = 08 for Western United States
  = 09 for Southwestern United States
- When T2 = Z, ii specifies the regional domain of the Aviation Surface Forecast Graphic as follows:
  = 90 for Continental United States
  = 91 for Northeastern United States
  = 92 for Eastern United States
  = 93 for Southeastern United States
  = 94 for North Central United States
  = 95 for Central United States
  = 96 for South Central United States

= 97 for Northwestern United States
= 98 for Western United States
= 99 for Southwestern United States

Additionally, a display of these graphics can be found at:
https://www.AviationWeather.gov/gfa/plot

3. Additional Information: N/A