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PNSWSH

Service Change Notice 10-42  
National Weather Service Headquarters Washington DC  
810 AM EDT Thu Oct 14 2010

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From:         Cynthia Abelman  
              Chief, Aviation Services Branch

Subject: Change in Format of Experimental World Area Forecast System  
Gridded Forecasts of Icing, Clear Air Turbulence (CAT) and Cumulonimbus  
Cloud (Cb): Effective November 18, 2010

Effective Thursday, November 18, 2010, at 0000 Coordinated Universal Time (UTC), the NWS will cease gridded binary version one (GRIB1) format production of the Experimental World Area Forecast System (WAFS) Global Grids of Icing, Clear Air Turbulence and Cumulonimbus Clouds. At that time, the Experimental WAFS Global Grids of Icing, Clear Air Turbulence and Cumulonimbus Clouds will be produced only in GRIB version two (GRIB2) format.

The GRIB2 format was developed by the World Meteorological Organization (WMO). It is a binary format which contains gridded data. The name GRIB comes from Gridded Binary.

GRIB2 was approved for experimental use by the WMO/CBS in 1998 and for operational use in 2000. It addresses the problem of GRIB1 tables being full and no longer capable of expansion/extension. GRIB2 introduced a more comprehensive parameter identification system and expanded use of templates.

There are some differences at the technical encoding level between GRIB1 and GRIB2. The major differences from the meteorological and operational perspective between the two formats are as follows:

- a. GRIB2 is a regular grid with 1.25 X 1.25 degree (approximately 140 KM X 140 KM at the equator) resolution.
- b. GRIB1 has the longitudinal points on the grid thinned as the polar regions are approached.
- c. GRIB2 bulletins contain data covering the entire globe for each level and parameter in each bulletin. GRIB1 has separate bulletins for each octant of every level/parameter combination.
- d. GRIB2 data is compressed using the JPEG2000 standard. JPEG2000 decompression libraries will be necessary.
- e. GRIB2 has a temporal resolution of 3 hours, from T+06 to T+36 inclusive. GRIB1 has a temporal resolution of 6 hours: T+06 to T+36

inclusive.

f. GRIB2 has additional levels close to the normal cruise level of Airliners.

The Experimental GRIB2 WAFS Global Grids for Icing, Clear Air Turbulence and Cumulonimbus Cloud will only be available at the World Area Forecast System (WAFS) Internet File Service (WIFS):

<http://aviationweather.gov/wifs/>

Experimental GRIB2 Icing, Clear Air Turbulence and Cumulonimbus Cloud grids will be in a file folder labeled Trial Forecasts. The remainder of the operational WAFS Global Grids (i.e., temperature, wind, etc.) will remain available via WIFS in GRIB1 and GRIB2 format.

No changes are being made to the WMO headers for these experimental products.

For technical questions and support in registering a user account at the WIFS website or downloading and accessing the GRIB2 data, contact:

Ryan Solomon  
Aviation Weather Center  
Kansas City, MO  
816-584-7208  
[ryan.l.solomon@noaa.gov](mailto:ryan.l.solomon@noaa.gov)

For questions about this change, or the WAFS Global Grids data set, please contact:

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816-584-7204  
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National Service Change Notices are online at:

<https://www.weather.gov/notification/archive>

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