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PNSWSH

Technical Implementation Notice 11-58
National Weather Service Headquarters Washington DC
145 PM EST Fri December 30 2012

To National Weather Service (NWS) Offices
Federal Aviation Administration (FAA)
Family Of Services (FOS) Subscribers
Other Customers Of NWS Aviation Forecasts

From Cynthia Abelmann
Chief, Aviation Services Branch

Subject: Graphical Turbulence Guidance To Be Updated effective January 30, 2012

Note: The following changes have no impact on NOAA Weather Wire Service Subscribers

Effective January 30, 2012, 1200 Coordinated Universal Time (UTC), the NWS Aviation Weather Center in Kansas City, MO, will update the Graphical Turbulence Guidance (GTG) product in conjunction with the implementation of the Rapid Refresh (RAP) model. Thus change impacts users as follows:

1. Resolution of the grid spacing will increase from 20KM to 13KM.

2. As a result of increased resolution, the parameter Grid ID (PDS OCTET 7), internal to the GRIB file, will change to 130. For more information, see

http://www.nco.ncep.noaa.gov/pmb/docs/on388/tableb.html

3. Additional forecast hours valid at 04,05,07,08,10 and 11 hours

This change will affect the following WMO headers for GTG:

WMO HEADER	FLIGHT LEVEL
YVW*14 KKCI	FL450
YVW*15 KKCI	FL440
YVW*16 KKCI	FL430
YVW*17 KKCI	FL420
YVW*18 KKCI	FL410
YVW*19 KKCI	FL400
YVW*20 KKCI	FL390
YVW*21 KKCI	FL380
YVW*22 KKCI	FL370

YVW*23 KKCI FL360
YVW*24 KKCI FL350
YVW*25 KKCI FL340
YVW*26 KKCI FL330
YVW*27 KKCI FL320
YVW*29 KKCI FL310
YVW*30 KKCI FL300
YVW*32 KKCI FL290
YVW*33 KKCI FL280
YVW*34 KKCI FL270
YVW*36 KKCI FL260
YVW*38 KKCI FL250

YVW*39 KKCI FL240
YVW*41 KKCI FL230
YVW*43 KKCI FL220

YVW*45 KKCI FL210
YVW*46 KKCI FL200
YVW*48 KKCI FL190
YVW*50 KKCI FL180
YVW*53 KKCI 170
YVW*55 KKCI 160
YVW*57 KKCI 150
YVW*60 KKCI 140
YVW*62 KKCI 130
YVW*65 KKCI 120

YVW*67 KKCI 110
YVW*70 KKCI 100
ZVW*50 KKCI Composite

WHERE * = A = 00 HOUR FORECAST
* = B = 01 HOUR FORECAST
* = C = 02 HOUR FORECAST
* = D = 03 HOUR FORECAST
* = E = 04 HOUR FORECAST
* = F = 05 HOUR FORECAST
* = G = 06 HOUR FORECAST
* = H = 07 HOUR FORECAST
* = I = 08 HOUR FORECAST
* = J = 09 HOUR FORECAST
* = K = 10 HOUR FORECAST
* = L = 11 HOUR FORECAST
* = M = 12 HOUR FORECAST

The Graphical Turbulence Guidance graphics are computer-generated four-dimensional forecasts of information related to the likelihood of encountering atmospheric turbulence.

The product provides forecasts for the 48 contiguous United States, much of Canada and Mexico, and their respective coastal waters at flight altitudes from 10,000 MSL to FL450 only; it does not provide forecasts from the surface to 10,000 ft. Users

should also be aware that turbulence is a highly dynamic phenomenon and, in case of rapidly changing conditions, the product may not accurately convey a significant hazard.

GTG may be used as a higher-resolution supplement to AIRMETs and SIGMETs, but not as a substitute for the turbulence information they provide. GTG-2 graphics are authorized for use as an unrestricted, supplementary weather product. The GTG-2 does not have the capability to be amended. See the definition of primary and supplementary weather products below.

GTG is produced automatically from the 13 KM Weather Research and Forecasting Rapid Refresh (RAP) model runs. GTG produces an Analysis 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12-hour Turbulence Forecast every hour in GRIB format. This product also provides a composite field representing the maximum turbulence value between 10,000 and 45,000 feet for each analysis and forecast.

The GTG graphics suite is automatically produced with no human modifications. Information on the graphics is determined from observational data, pilot weather reports, upper air soundings, satellite soundings, automated aircraft reports, and surface weather reports, all of which are integrated with computer model output.

On January 24, 2012, Graphical Turbulence Guidance output in Gridded Binary (GRIB) format will be available through:

--NWS FTP servers at:
ftp://tgftp.nws.noaa.gov/SL.us008001/DC.avspt/DS.fipgb

--The Family of Services (FOS) High Resolution Data Service and Server Access Service
--Satellite Broadcast Network (SBN) NOAAPORT channel

To obtain sample gridded GTG data, contact:

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If you have any questions regarding the new GTG product, contact:

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National Technical Implementation Notices are online at:

http://www.nws.noaa.gov/om/notif.htm

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