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Technical Implementation Notice 10-43
National Weather Service Headquarters Washington DC
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Chief Science Plans Branch
Office of Science and Technology

Subject: Addition of GFS-Based DNG and RTMA Products for Guam:
Effective November 16, 2010

On Tuesday, November 16, 2010 at 1200 Coordinated Universal Time (UTC), the National Centers for Environmental Prediction (NCEP) will add Global Forecast System (GFS)-based Downscaled Numerical Weather Prediction Grids (DNG) and the Real Time Mesoscale Analysis (RTMA) products for Guam to NOAAPort and the National Digital Guidance Database (NDGD). The gridded products will be available in GRIB2 format on the same 2.5 km Mercator grid used in the National Digital Forecast Database (NDFD) grids for Guam.

The GFS-based DNG products will be produced for the 0000, 0600, 1200 and 1800 UTC model cycles with output every 3 hours from 0 to 192 hours after model run time. The Guam DNG products are horizontally interpolated from the 27 km GFS native grid to the 2.5 km NDFD grid. Vertical interpolation to the high resolution terrain is performed using Smartinit. The Guam DNG products will be available only on NOAAPort and not in the NDGD. The following elements will be produced:

temperature at surface level
dew point at surface level
specific humidity at surface level
u - wind at surface level
v - wind at surface level
wind gust at surface level
pressure at surface level
height at surface level
land mask at surface level
total cloud cover at surface level
height at lowest level wet bulb
visibility at surface level
wind direction at planetary boundary
wind speed at planetary boundary

relative humidity at planetary boundary
geopotential height at planetary boundary
best (4 layer) lifted index at surface level
total precipitation at surface level
categorical rain at surface level
maximum temperature at surface level
minimum temperature at surface level
maximum relative humidity at surface level
maximum relative humidity at surface level

The products will be available with WMO headers L***** KWBT or M***** KWBT. More details of the WMO headers for the Guam GFS DNG can be found at:

http://www.nco.ncep.noaa.gov/pmb/changes/gfs_dng_guam.shtml

The RTMA for Guam is a set of gridded surface analyses and surface analysis uncertainty fields made available every 3 hours, starting at 0000 UTC. The RTMA products will be available on NOAAPort and on NDGD.

The following is a list of Guam RTMA products and their associated WMO headers:

WMO Header	RTMA Parameter
LTGA98 KWBR	temperature
LTGA98 KWBR	temperature analysis uncertainty
LRGA98 KWBR	dewpoint temperature
LRGA98 KWBR	dewpoint temperature uncertainty
LNGA98 KWBR	wind speed
LNGA98 KWBR	wind speed analysis uncertainty
LNGA98 KWBR	wind direction
LNGA98 KWBR	wind direction analysis uncertainty
LUGA98 KWBR	u-wind analysis (not sent to NDGD)
LVGA98 KWBR	v-wind analysis (not sent to NDGD)
LPGA98 KWBR	surface pressure analysis
LPGA98 KWBR	surface pressure analysis uncertainty
LHGA98 KWBR	model terrain height

The RTMA data for Guam will be available from NDGD at:

<ftp://tgftp.nws.noaa.gov/SL.us008001/ST.expr/DF.gr2/DC.ndgd/GT.rtm>
a/AR.guam

DNG and RTMA data for Guam is being run in parallel at NCEP and the data are available on the NCEP server via http and ftp at:

<http://www.ftp.ncep.noaa.gov/data/nccf/com/gfs/para> (Guam DNG)
<http://www.ftp.ncep.noaa.gov/data/nccf/com/gurtma/para> (Guam RTMA)

or

<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/gfs/para> (Guam DNG)
<ftp://ftp.ncep.noaa.gov/pub/data/nccf/com/gurtma/para> (Guam RTMA)

There are two files for each hour located on this server. Files with names such as `gurtma.t00z.2dvaranl_ndfd.grb2` contain all of the RTMA analysis fields and the associated errors. Files with names such as `gurtma.t00z.2dvarges_ndfd.grb2` contain the first guess fields used by the RTMA.

NCEP will continue to refine the RTMA. Users may provide feedback on the experimental RTMA products at:

<http://www.weather.gov/survey/nws-survey.php?code=rtma>

For questions regarding the GFS-based DNG please contact:

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National Technical Implementation Notices are online at:

<http://www.weather.gov/os/notif.htm>

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