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Technical Implementation Notice 10-43
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 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 three 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 World Meteorological Organization (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 three 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.rtma/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.2dvaran1_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:

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

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