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PNSWSH

Technical Implementation Notice 14-49
National Weather Service Headquarters Washington DC
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To: Subscribers:
-Family of Services
-NOAA Weather Wire Service
-Emergency Managers Weather Information Network
-NOAAPORT
-Other NWS Partners, Users and Employees

From: Timothy McClung
Chief, Science Plans Branch
Office of Science and Technology

Subject: Multi-Radar, Multi-Sensor System Products Added
to SBN and NOAAPORT Effective November 24, 2014

On or about Tuesday, February 17, 2015, beginning at 1500 Coordinated Universal Time (UTC), selected products from the Multi-Radar, Multi-Sensor (MRMS) System produced by the National Centers for Environmental Prediction will be added to the Satellite Broadcast Network (SBN) and NOAAPORT. MRMS began operational production of GRIB2 formatted products on September 29, 2014.

MRMS is a system with automated algorithms that quickly and intelligently integrate data streams from multiple radars, surface and upper air observations, lightning detection systems, and satellite and forecast models. MRMS generates a high resolution 3D radar mosaic and related 2D severe weather products for NWP model data assimilation and aviation applications. MRMS also produces a suite of quantitative precipitation estimation products for the monitoring and warnings of floods and flash floods and to support comprehensive hydrologic and ecosystem modeling. Numerous two-dimensional multiple-sensor products offer assistance for hail, wind, tornado, quantitative precipitation estimation forecasts, convection, icing, and turbulence diagnosis. Users can find a product reference guide and training at the NWS Warning Decision Training Branch website:

<http://www.wdtb.noaa.gov/courses/mrms>

Most MRMS products are generated on a 1km grid over the Contiguous United States (CONUS) domain and updated as frequently as every 2 minutes. Data volume will vary, depending on the current meteorological conditions, but could be as high as 14GB per day or 13MB every 2 minutes. Due to the large data volumes this system generates, users who do not wish to receive MRMS

products should filter out the applicable WMO headers from their NOAAPORT feed.

WMO Headers and official WMO title for the new products are as follows:

YAUC01 Composite Reflectivity
YAUC02 Composite Reflectivity Height
YAUC03 Composite Reflectivity [0-4 km]
YAUD01 Radar Quality Index
YAUD02 Seamless Hybrid Scan Reflectivity
YAUL01 Cloud-to-Ground Lightning Density (1, 5, 15, and 30 min.)
YAUL02 Cloud-to-Ground Lightning Probability (0-30 min.)
YAUM03 Probability of Warm Rain (POWR)
YAUP01 Surface Precipitation Type
YAUP02 Instantaneous Radar Precipitation Rate
YAUP03 Radar 1H, 3H, 6H, 12H, 24H, 48H, 72H QPE
YAUP04 Local Gauge Bias Corrected 1H, 3H, 6H, 12H, 24H, 48H,
and 72H QPE
YAUP06 Mountain Mapper 1H, 3H, 6H, 12H, 24H, 48H, 72H QPE
YAUQ01 Base Reflectivity
YAUS04 Low-Level Rotation Tracks (60 and 1440 min. accum.)
YAUS06 Mid-Level Rotation Tracks (60 and 1440 min. accum.)
YAUS10 Maximum Estimated Size of Hail (MESH)
YAUS11 MESH Tracks (60 and 1440 min. accum.)
YAUS13 Vertically Integrated Liquid (VIL)
YAUS15 Vertically Integrated Ice (VII)
YAUS16 18, 30, 50, and 60 dBZ Echo Top (ET)
YAUS17 Height of 50dBZ Echo Above -20 degrees C
YAUS18 Height of 50dBZ Echo Above 0 degrees C
YAUS20 Height of 60dBZ Echo Above 0 degrees C
YAUS21 Reflectivity at 0 degrees C, -10 degrees C, -20 degrees C
YAUS22 Reflectivity At Lowest Altitude (RALA)

CCCC = KNWR

In addition to NOAAPORT dissemination, MRMS products can be retrieved via Local Data Manager (LDM) directly from NCEP Central Operations. To learn more about this dissemination path, please contact the POCs listed below. Additional technical information regarding the MRMS system can be found at

<http://www.nssl.noaa.gov/projects/mrms/>

Information on WMO Headers and NCEP GRIB messages is online at:

<http://www.nco.ncep.noaa.gov/pmb/docs/on388/appendixa.html>

For questions concerning the MRMS system, contact:

Ken Howard
National Severe Storms Lab (NSSL)
Norman, OK 73072
Phone: (405) 535-9863

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For questions regarding SBN and NOAAPORT activation contact:

Scott Jacobs
NCEP/NCO
College Park, MD 20740
Phone: (301) 683-3910
Email: scott.jacobs@noaa.gov

National Technical Implementation Notices are online at:

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

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