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Technical Implementation Notice 14-49 Corrected
National Weather Service Headquarters Washington DC
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 -NOAA Weather Wire Service
 -Emergency Managers Weather Information Network
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From: Timothy McClung, Chief
 Science Plans Branch
 Office of Science and Technology

Subject: Corrected: Multi-Radar, Multi-Sensor System Products
Added to SBN and NOAAPort: Effective July 8, 2015

Corrected date of adding products to July 8, 2015.

The unanticipated technical problems with a component of the Satellite Broadcast Network (SBN) software has been fixed and implemented. On or about Wednesday, July 8, 2015, the NOAA Advanced Weather Interactive Processing System (AWIPS) Program Office will add the Multi-Radar, Multi-Sensor (MRMS) to the SBN and NOAAPort.

Once implemented, selected products from the MRMS System produced by the National Centers for Environmental Prediction (NCEP) will be added to the SBN and NOAAPort. MRMS began operational production of gridded binary version 2 (GRIB2) formatted products on September 29, 2014.

MRMS is a system with automated algorithms that quickly 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 3-Dimensional (3D) radar mosaic and related 2-Dimensional (2D) severe weather products for numerical weather prediction (NWP) model data assimilation and aviation applications. It also produces a suite of quantitative precipitation estimation (QPE) products for the monitoring and warnings of floods and flash floods in support of comprehensive hydrologic ecosystem modeling. Numerous 2D multiple-sensor

products offer assistance for hail, wind, tornado, QPE forecasts, convection, icing and turbulence diagnosis. A product reference guide and training for users are available from the NWS Warning Decision Training Branch website at

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

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

WMO Headers and the official WMO titles 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, 30 minutes)
YAUL02 Cloud-to-Ground Lightning Probability (0-30 minutes)
YAUM03 Probability of Warm Rain (POWR)
YAUP01 Surface Precipitation Type
YAUP02 Instantaneous Radar Precipitation Rate
YAUP03 Radar 1-hour (H), 3H, 6H, 12H, 24H, 48H, 72H QPE
YAUP04 Local Gauge Bias Corrected 1H, 3H, 6H, 12H, 24H, 48H, 72H QPE
YAUP06 Mountain Mapper 1H, 3H, 6H, 12H, 24H, 48H, 72H QPE
YAUQ01 Base Reflectivity
YAUS04 Low-Level Rotation Tracks (60 and 1,440 min. accum.)
YAUS06 Mid-Level Rotation Tracks (60 and 1,440 min. accum.)
YAUS10 Maximum Estimated Size of Hail (MESH)
YAUS11 MESH Tracks (60 and 1,440 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°C
YAUS18 Height of 50dBZ Echo Above 0°C
YAUS20 Height of 60dBZ Echo Above 0°C
YAUS21 Reflectivity at 0°C, -10°C, -20°C
YAUS22 Reflectivity At Lowest Altitude (RALA)

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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 points of contact (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
Phone: (405) 535-9863
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For questions regarding SBN and NOAAPort activation, contact:

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

National Technical Implementation Notices are online at:

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

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