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From: Stephan Smith
Acting Director
NWS Office of Science and Technology Integration

Subject: Soliciting Public Comments through December 19, 2020 on Proposed Changes to MRMS Products Available on the SBN and the Removal of Binary Products from the MRMS System

The NWS is soliciting comments through December 19, 2020 on adding or removing certain Multi-Radar Multi-Sensor (MRMS) products from the Satellite Broadcast Network (SBN) and the removal of binary products from the MRMS system. NWS intends these changes to result in a more efficient, reliable delivery process for new and future NWS products.

Tables 1-3 below contain descriptions of the recommended SBN actions for MRMS products. Products removed from the SBN will remain available on:

1. The National Centers for Environmental Prediction (NCEP) Web Services:

https://mrms.ncep.noaa.gov/data/

2. The NCEP Local Data Manager (LDM) by requesting access:

https://www.nssl.noaa.gov/projects/mrms/MRMS_data.php

Table 1. World Meteorological Organization (WMO) Headers and Product Names for MRMS Products Proposed for Addition to the MRMS SBN

Contiguous United States (CONUS) Products to be added to the MRMS SBN:	
YAUE01	Flooded Locations and Simulated Hydrographs (FLASH) Coupled Routing and Excess Storage (CREST) Unit Streamflow
YAUE04	FLASH Sacramento Soil Moisture Accounting (SAC) Unit Streamflow
YAUE06	FLASH SAC Soil Saturation
YAUE09	FLASH Precipitation Average Recurrence Interval
YAUE10	FLASH Quantitative Precipitation Estimate to Flash Flood Guidance (QPE-to-FFG) Ratio
YAUS09	Probability of Severe Hail
YAUF01	Probability of Severe (JSON format)

Alaska Products to be Added to the MRMS SBN:

YAAC01	Composite Reflectivity
YAAP02	PrecipRate
YAAP03	RadarOnly_QPE_01-hour, 03-hour, 06-hour, 12-hour, 24-hour, 48-hour, 72-hour
YAAP04	MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass1
YAAP06	MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass2

Hawaii Products to be Added to the MRMS SBN:

YAHP02	PrecipRate
YAHP03	RadarOnly_QPE_01-hour, 03-hour, 06-hour, 12-hour, 24-hour, 48-hour, 72-hour
YAHP04	MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass1
YAHP06	MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass2

Table 2. WMO Headers and Product Names for MRMS Products Currently on the MRMS SBN to be Retained

CONUS Products to be Retained on the MRMS SBN

YAUC01	Composite Reflectivity
YAUP01	Surface Precipitation Type (Convective, Stratiform, Tropical, Hail, Snow)
YAUP02	Precipitation Rate
YAUP03	Radar Precipitation Accumulation
YAUP04	MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass1
YAUP06	MultiSensor_QPE_[01, 03, 06, 12, 24, 48, 72]hour_Pass2
YAUQ01	Mosaic Base Reflectivity (optimal method)
YAUS04	Low-Level Rotation Tracks (30, 60, ... minutes accumulation)
YAUS06	Mid-Level Rotation Tracks (30, 60, ... minutes accumulation)
YAUS10	Maximum Estimated Size of Hail (MESH)
YAUS11	MESH Hail Swath (* min)
YAUS15	Vertically Integrated Ice (VII)
YAUS22	Reflectivity at Lowest Altitude (RALA)

Table 3. WMO Headers and Product Names for MRMS Products Proposed for Removal from the MRMS SBN

CONUS Products to be Removed from the MRMS SBN

YAUC02	Composite Reflectivity Height
YAUC03	Composite Reflectivity [0-4 km]
YAUD01	Radar Quality Index
YAUD02	Seamless Hybrid Scan Reflectivity (HSR)
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
YAUS13	Vertically Integrated Liquid (VIL)
YAUS16	xx dBZ Echo Top (ET)
YAUS17	Height of 50dBZ Echo Above -20C

YAUS18 Height of 50dBZ Echo Above 0C
YAUS20 Height of 60dBZ Echo Above 0C
YAUS21 Reflectivity at xC

NWS is also proposing to remove binary data products from the MRMS LDM feed. These products are available in GRIdded Binary version two (GRIB2) format. The binary data files being proposed for removal from the MRMS Local Data Manager (LDM) feed and their equivalent GRIB2 data files are listed in Table 4 below.

Table 4. Product Identifiers for the MRMS Files being Proposed for Removal from the MRMS LDM and their Equivalent in GRIB2 Format

Binary	GRIB2
cref/CREF	MergedReflectivityQCComposite
etp18/ETP18	EchoTop_18
etp30/ETP30	EchoTop_30
posh/POSH	POSH
shi/SHI	SHI
vil/VIL	VIL
tile01/mrefl/MREF3D33L	MergedReflectivityQC*
tile02/mrefl/MREF3D33L	MergedReflectivityQC*
tile03/mrefl/MREF3D33L	MergedReflectivityQC*
tile04/mrefl/MREF3D33L	MergedReflectivityQC*

The intermediate binary format of these products are available only for the contiguous U.S. (CONUS) and only via LDM (feedtype: NOTHER). They are not distributed by any other method.

There are 33 2D MergedReflectivityQC products (one per vertical level of the MRMS 3-dimensional (3D) reflectivity mosaic). The intermediate binary files are 3D products covering a quarter of the CONUS each. Tile 01, 02, 03 and 04 represent the CONUS northwest, northeast, southwest and southeast tiles, respectively.

These changes will occur when NCEP implements the next version of MRMS, Version 12.1, into operations. NWS will collect comments on these proposed product changes for 30 days. If product changes are approved, NWS will issue a Service Change Notice at least 30 days before implementing these changes.

Send comments on this proposal to:

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National Public Information Statements are online at:

https://www.weather.gov/notification/

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