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PNSWSH

Service Change Notice 21-27 Updated
National Weather Service Headquarters Silver Spring MD
110 PM EDT Mon Apr 11 2022

To: Subscribers:
-NOAA Weather Wire Service
-Emergency Managers Weather Information Network
-NOAAPORT
Other NWS partners, Users and NWS Employees

From: Ben Kyger
Director, NCEP Central Operations

Subject: Updated: Upgrade IDP Multi-Radar, Multi-Sensor Application
Effective April 21, 2022

Updated for new effective date of April 21, 2022.

Effective on or about April 21, 2022, at 1600 Universal Coordinated Time (UTC), the National Centers for Environmental Prediction (NCEP) Central Operations (NCO) will upgrade the Multi-Radar, Multi-Sensor (MRMS) Integrated Dissemination Program (IDP) application to Version 12.2.0.

The IDP MRMS output can be found
1. On the NCEP Web Services:
   http://mrms.ncep.noaa.gov/data/
2. On the NCEP Local Data Manager (LDM) by requesting access:
   https://www.nssl.noaa.gov/projects/mrms/MRMS_data.php
3. On SBN/NOAAPORT

The technical enhancements include the following:
(A) Canadian C-band and S-band Radars

Canada is modernizing its radar network by replacing its older C-band radars with new dual pol S-band radars. MRMS v12.2 will process data from the new S-band Canadian radars. The older C-band Canadian radars will be removed from MRMS entirely.

As of December 2021, there are 25 S-band Canadian radars. MRMS v12.2 will process data from 23 S-band Canadian radars. The two that will not be included are a test radar (CASTS) and one which is outside the MRMS domain (CASHR). Eight additional C-band Canadian radars are expected to be fully replaced by new S-band radars by early 2023. Further additions of Canadian S-band radars to the MRMS application will be announced in future Service Change Notices.

The Canadian S-band radars are more fully integrated into MRMS's products than Canada's C-bands. The addition of these radars will not generate any new products, but some products which did not previously contain Canadian data will benefit from their inclusion. They are as follows:

- MergedBaseReflectivity (unQC)
- MergedBaseReflectivityQC
- MergedReflectivityComposite (unQC)
- MergedReflectivityQComposite (2D Max Method)
- ReflectivityAtLowestAltitude (unQC)
- BREF_1HR_MAX
- CREF_1HR_MAX
- MergedRhoHV (3D - all levels)
- MergedZdr (3D - all levels)
- MergedAzShear0to2kmAGL
- MergedAzShear3to6kmAGL
- RotationTrack*min
- RotationTrackML*min

(B) Changes to existing products

- Multiple algorithm updates and minor bug fixes for Severe Weather and Hydromet products.
- Improvements to gauge processing and reference data allowing for more gauges to be integrated into MRMS and done so with greater accuracy and reliability.
- At the request of NWS Northeast and Lower Mississippi River Forecast Centers, MRMS now applies a minimum threshold to the QPE it converts to XMRG HRAP for the Northeast and Lower Mississippi River Forecast Centers.
- A correction for a minor configuration error leading to slightly incorrect grid coordinates for the Hawaii Multi-Sensor QPE and Gauge Influence Index products (Pass1 and Pass2).

For details on updates to existing product output including lists of affected products, please see additional link here:
https://www.weather.gov/idp/MRMS_v12.2_Supplemental

For a real-time feed of data, that include all the changes listed in this notice, please see the Web Service URL:
https://mrms-qa.ncep.noaa.gov/data/

NCEP encourages users to ensure their decoders are flexible and are able to adequately handle changes in content order, changes in the scaling factor component within the product definition section (PDS) of the GRIB files, and any volume changes which may be forthcoming. These elements may change with future NCEP application upgrades. NCEP will make every attempt to alert users to these changes prior to any implementations.

NCEP will evaluate all comments to determine whether to proceed with this upgrade. For questions regarding these application changes, please contact:

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NWS Service Change Notices are online at:

https://www.weather.gov/notification

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