Release Notes

Software	Multi-Radar Multi-Sensor (MRMS)
Version	11.0.3
Implementation date/time	November 15, 2016 @ 1600Z
Purpose	MRMS integrates radar, surface observations, satellite, lightning and numerical weather prediction grids and generates automated, seamless national 3D radar mosaic, storm attributes and multi sensor quantitative precipitation estimates at high temporal and spatial resolution.

Changes being made for this release	**Additions**
	
	• AutoNowCaster (ANC) algorithm produces two new products primarily for AWC
	    ○ Convective Likelihood
	    ○ Final Forecast (60 minute reflectivity forecast)
	• Updated WDSS2 algorithm
	    ○ Increased lightning product stability
	    ○ Improved lightning density algorithm
	    ○ Improved azimuthal shear and rotation track products
	    ○ Added VII to NIDS data generated for SPC
	    ○ Two new 5km reflectivity products
	        ▪ 1km reflectivity (resampled to 5km)
	        ▪ RALA (resampled to 5km)
	• Hydromet (HMET, a.k.a, HMRG) updates
	    ○ Added 3km HRRR to model field inputs, which also still includes the 13km RAP.
	    ○ Major improvements to Canadian radar quality control
	    ○ Improvements to WSR-88D quality control near the melting layer
	    ○ Revised radar QPE to minimize data voids near radar sites and areas of wind farm clutter suppression
	    ○ Reduced the radar QPE warm season wet bias in the northern and central plains by adding a climatologically base tropical rain rate scheme.
	    ○ Improved gauge data ingest and quality control of gauge data in areas with no radar coverage and during times of winter precipitation.
	    ○ Improved gauge corrected QPEs to account for sampling discrepancies between radar and gauges.
	    ○ Added a new product called Gauge Influence Index that shows the influence of gauges in the gauge corrected QPE fields.
	    ○ Changed the frequency of all 48 and 72H QPEs from daily at 12Z to hourly. Note: only the 12Z products will be sent via the SBN
	
	RIDGE2 updates
	
	• Increased geoTIFF resolution for single radar products
	• Changed file names to meet RIDGE2's requirement

| | **Outgoing products (new file locations, new filenames)**
  • The location of many MRMS files had changed. Below is a summary and updated path to data
    o GRIB2
      ▪ No change to file naming conventions or LDM feedtype
      ▪ /nfsdata/realtime/outgoing/grib2/[ALASKA,ANC,CARIB,CONUS, CONUS_5KM,CONUSPLUS,FLASH,GUAM,HAWAII]
    o MRMS binary
      ▪ No change to file naming conventions or LDM feedtype
      ▪ /nfsdata/realtime/outgoing/mrms_binary
    o SPC NIDS
      ▪ No change to file naming conventions or LDM feedtype
      ▪ /nfsdata/realtime/outgoing/spcnids/CONUS
    o GeoTIFF
      ▪ File naming conventions have changed at the request of RIDGE2 (Paul Kirkwood)
      ▪ Names of MRMS products in RIDGEII against the respective standard MRMS product name can be found in the following XML file: /home/mrms/ref_data/builds/WDSS2/src/w2/w2config/misc/mrms2Ridge.xml
      ▪ /data/realtime/RIDGEII/[radar name] on ridge[1-7], ak, hi, trop
        ▪ [radar]_L[2,3]_[productname]_[YYYYMMDD_HHmmSS].tif.gz
      ▪ /nfsdata/realtime/RIDGEII/[ALASKA,CARIB,CONUS,GUAM,HAWAII]
        ▪ [domain]_L[2,3]_[product name]_[YYYYMMDD_HHmmSS].tif.gz
    o XMRG
      ▪ No change to file naming conventions or LDM feedtype
      ▪ /nfsdata/realtime/outgoing/xmrg
    o Lightning products
      ▪ Product name changed from "NLDN_LightningDensity" (with 001_min, 005_min, 015_min, 030_min subproducts) to "NLDN_CG_001min, NLDN_CG_005min, NLDN_CG_015min, NLDN_CG_030min" (no subproduct)
        ▪ Example GRIB2 files
          ▪ Old: MRMS_NLDN_LightningDensity_001min_00.00_20160712-115901.grib2.gz
          ▪ New: MRMS_NLDN_CG_001min_00.00_20160712-115901.grib2.gz

Raw Inputs

  • NWS watches and warnings are no longer required input for MRMS on nringest1
  • Both CANRAD CONVOL and DOPVOL data are needed on can[1-3]. Previously, only CONVOL was required. |
| **Developed by** | National Severe Storms Lab/Office of Oceanic and Atmospheric Research |

Runs on	Integrated Dissemination Program virtual machine servers (58 primary and 58 hot backup at both the College Park and Boulder facilities)
Community software	None
Input	Observational data, satellite and radar imagery, lightning observations; Rapid Update model (RAP); HADS
Output and where to find it	Collection of products, ranging from 2- and 3-dimensional radar mosaics, severe weather and aviation diagnostics to quantitative precipitation estimates. Level 2 and Level 3 GeoTIFF RIDGEII products. Provided through internal Unidata Local Data Manager (LDM) to NCEP national centers and to WFOs and RFCs. • LDM-6 Feedtype *EXP* for grib2 and XMRG output • LDM-6 Feedtype *NOTHER* for GeoTIFF RIDGEII output • HTTP distribution through http://mrms.ncep.noaa.gov/data/
Primary users	NWS forecasters at WFOs, RFCs, SPC, AWC, WPC, EMC, OWP

For more information on this application, please contact ncep.list.idp_support@noaa.gov.