

NOUS41 KWBC 271730
PNSWSH

Service Change Notice 22-103
National Weather Service Headquarters Silver Spring MD
130 PM EDT Thu Oct 27 2022

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

From: Daryl Kleist
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 Modeling and Data Assimilation Branch

Subject: NAM, RAP, RTMA, URMA, GFS, GDAS, and CDAS obsproc.v1.1.0 Upgrade
Due to the Addition of New Observation Types and the Removal of One
Observation Type: Effective November 29, 2022

Effective November 29, 2022, the National Weather Service will deploy an upgrade to the Observation Processing to include observations from marine surface autonomous vehicles (Saildrone), subsurface profilers (subsurface float, glider and argos), snow cover from ground stations, and Global Precipitation Mission Microwave Imager 11C radiances. Also, the current Metop-B Advanced Very High Resolution Radiometer (AVHRR) Atmospheric Motion Vectors (AMVs) will be replaced by new Metop-B and Metop-C AVHRR AMVs products. Additionally, GPS Radio Occultation (RO) observations from Sentinel-6A will be added to the existing Radio Occultation dump files.

The new Rapid Refresh (RAP), Real Time Mesoscale Analysis (RTMA), UnRestricted Mesoscale Analysis, (URMA), Global Forecast System (GFS), Global Data Assimilation System (GDAS), and Climate Data Assimilation System (CDAS) networks will provide:

a) New GFS and GDAS bufr dump files:

snocvr.bufr_d - snow cover, depth/density, water equivalent from ground stations
gmilcr.bufr_d - GMI Level 1C-R Brightness Temperature Family (GPM-core satellite)
saldrn.bufr_d - Surface Marine Saildrone (when available)
subpfl.bufr_d - Oceanographic subsurface float and glider profiles

b) Updated contents in bufr dump files for all networks except the North American Model (NAM):

satwnd.bufr_d* - the current Metop-B AVHRR AMVs (tank b005/xx080, i.e., NC005080) will be retired on October 31, 2022 and replaced by Metop-B and Metop-C AVHRR AMVs (tank b005/xx081, i.e. NC005081) from a new winds retrieval (so called nested-tracking) utilizing the Binary Universal Form

for the Representation of meteorological data (BUFR) format used for GOES AMVs.

Users will need GFS v16.3 GSI code to read and use these new winds:
gpsro.bufr_d.nr - GPSRO files will now include GPS Radio Occultation (RO) observations from Sentinel-6A (NC003010, SAID=066)

- All of the above new and updated BUFR dump files will be generated at the temporal frequency of the existing observational products, and will be shared on NCEP web services (NOAA Operational Model Archive and Distribution System (NOMADS) and FTTPRD).

- NAM will no longer include SYNDATA subsets in the generation of prepbufr files.

The above changes will affect data on NOMADS/FTTPRD as follows:

- New GFS and GDAS bufr dump files listed in a) will be available on NCEP web services at:

<https://nomads.ncep.noaa.gov/pub/data/nccf/com/obsproc/prod/>
<https://ftpprd.ncep.noaa.gov/data/nccf/com/obsproc/prod/>
<ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/obsproc/prod/>

{MOD}.{YYYYMMDD}/{MOD}.t{CC}z.{TYPE}.tm00.bufr_d
Where YYYYMMDD is forecast date, MOD is gfs and gdas, CC is forecast cycle, and TYPE is snocvr, gmilcr, saldrn and subpfl.

- Updated contents of bufr dump files listed in b) will affect the following files on NCEP web services:

<https://nomads.ncep.noaa.gov/pub/data/nccf/com/obsproc/prod/>
<https://ftpprd.ncep.noaa.gov/data/nccf/com/obsproc/prod/>
<ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/gobsprocfs/prod/>

{MOD}.{YYYYMMDD}/{MOD}.t{CC}z.satwnd.tm00.bufr_d
Where YYYYMMDD is forecast date, MOD is gfs, gdas, rap, rap_e, rap_p, rtma_ru and CC is forecast cycle.

{MOD}.{YYYYMMDD}/{MOD}.t{CC}z.gpsro.tm00.bufr_d.nr
Where YYYYMMDD is forecast date, MOD is gfs and gdas and CC is forecast cycle.

cdas.{YYYYMMDD}/cdas.t{CC}z.satwnd.tm*.bufr_d.unblok
Where YYYYMMDD is forecast date and CC is forecast cycle.

NCEP encourages users to ensure their processing is flexible to adequately handle the new data, as well as increased file sizes for satwnd and gpsro data. Even though content within the files has changed, downstream file readers should not need to change in response, except for the reader for satwnd data (see b) above).

Parallel data is available in the following locations:

<https://nomads.ncep.noaa.gov/pub/data/nccf/com/obsproc/v1.1>
<https://nomads.ncep.noaa.gov/pub/data/nccf/com/obsproc/para>
<https://ftpprd.ncep.noaa.gov/data/nccf/com/obsproc/v1.1>
<https://ftpprd.ncep.noaa.gov/data/nccf/com/obsproc/para>
<ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/obsproc/v1.1>
<ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/obsproc/para>

Any questions, comments, or requests regarding this implementation should be directed to the contacts below. We will review any feedback and decide whether to proceed.

For any comments/feedback on the GPS-RO BUFR dump file upgrade at the Environmental Modeling Center (EMC), please contact:

Dr. Daryl Kleist
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For questions regarding the data flow aspects, please contact:

Anne Myckow
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ncep.pmb.dataflow@noaa.gov

National Service Change Notices are online at:

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

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