

NEXRAD Format Change Announcement

NCEI is changing the process and format used to ingest and archive the NEXRAD Level-2 Radar Data. The new data format is now going to preserve the internal compression used during the transmission of data to NCEI. This format is common throughout the Radar community. A variety of Radar tools and libraries, listed on the NCEI website, support the format. Supported tools:

<https://www.ncdc.noaa.gov/data-access/radar-data/radar-display-tools>

Date of change: June 1st, 2016

Note: This change only affects data after June 1st, 2016. Historical data will not be changed.

Overview of upcoming changes:

1. Naming convention for the archived hourly tar files

Current example file name:

NWS_NEXRAD_NXL2DP_KILX_20160315020000_20160315025959.tar

New example file name:

NWS_NEXRAD_NXL2DPBL_KILX_20160315020000_20160315025959.tar

The additional 'BL' in the product section of the file name indicates that the custom Block BZip2 internal compression is used for the volume scan files within the tar file.

2. The naming convention of the volume scan files

Current example file name:

KILX20160315_000554_V06.gz

New example file name:

KILX20160315_000554_V06.ar2v

The .ar2v extension of the file name indicates that the custom Block BZip2 internal compression is used for the volume scan files within the tar file.

3. The binary file format

The internal binary file format will remain 'Message 31', as defined in the Interface Control Documents (ICDs) provided by NOAA's National Weather Service (NWS) Radar Operations Center.

<http://www.roc.noaa.gov/wsr88d/BuildInfo/Files.aspx>

(ICD FOR RDA/RPG documents)

The upcoming change pertains to the collection and storage of data at NCEI. NCEI receives these data in multiple messages, each representing a portion of a sweep, and then concatenates the messages to create the entire volume scan. Each message has an uncompressed header, followed by bzip2-compressed content. NCEI is currently decompressing these messages before combining into the volume scan file. The volume scan file is compressed using gzip compression. After the upcoming change, NCEI will no longer decompress these messages and will instead concatenate the compressed messages into the single volume scan file. The volume scan file will not be recompressed, because the data inside is already received as bzip2 compressed messages. The Radar Operations Center documentation describes the transmission method. (ICD for ARCHIVE II/USER documents)

Sample Data:

Samples of the new data format are available from NCEI. From the Archive Access system: <http://www.ncdc.noaa.gov/has/has.dsselect>

Expand the 'Radar' menu and select 'NEXRAD Level II - Block BZip2 Format (Example data for upcoming archive format change)

Radar

NEXRAD (Next Generation Radar) currently comprises 159 sites throughout the United States and select overseas locations. [More »](#)

- [NEXRAD Level II](#)
- [NEXRAD Level II - Block BZip2 Format \(Example data for upcoming archive format change\)](#)
Period Of Record: 03/01/2016 To 03/21/2016
[Order Data](#) | [Documentation](#) 
- [NEXRAD Level III](#)

Feedback and Questions:

Please contact NCEI at ncei.orders@noaa.gov with questions, concerns or suggestions regarding this upcoming change. Full contact information including phone is available from: <https://www.ncei.noaa.gov/contact> .