

## **This document contains instructions for uploading data from EPN stations to the two regional EPN data centres: BKG (Germany) and BEV (Austria).**

Questions? Contact [epncb@oma.be](mailto:epncb@oma.be)

### 1. INTRODUCTION

It is expected that station operators provide to EUREF all their RINEX data starting from the installation of the station or the moment the station data are considered as reliable.

Operational daily/hourly data submissions are done to the BEV and BKG data centers (see instructions in section 2). In addition to these operational data submissions, also the historical data, which are the older data from before the operational submissions to BKG and BEV have started, should be provided. These data should be submitted to the EPN CB (see instructions in section 3). The submission of historical data is typically a one-shot operation.

*Important: In all cases, data submission to EUREF (BEV, BKG, EPN CB) can only start if a site log is available from the EPN Central Bureau. For stations just proposed to the EPN, this site log will appear in the page [https://epncb.oma.be/\\_networkdata/proposed.php](https://epncb.oma.be/_networkdata/proposed.php) as soon as it is available. The site log is necessary to enable a crosscheck of the station site log with the RINEX header of the submitted data.*

### 2. UPLOADS OF OPERATIONAL DATA

This concerns the operational daily/hourly uploads of your data directly after observation.

#### 2.1 WHAT SHOULD BE UPLOADED?

- Daily and hourly RINEX 3
  - o RINEX version 3.03, 3.04 or 3.05 observation and navigation files (a mixed (MN) navigation file can be submitted).
  - o Use the long RINEX 3 file naming convention as described in section 5 of the RINEX 3 format description (Link to <https://files.igs.org/pub/data/format/rinex305.pdf>)
  - o Hatanaka compress the RINEX observation files (see <https://terras.gsi.go.jp/ja/crx2rnrx.html>)
  - o Use gzip compression before uploading the files
- Daily and hourly RINEX 2

The EUREF Governing Board has decided that EUREF stop supporting the old RINEX 2 format. Hence, it is not necessary anymore to submit daily and hourly RINEX 2 data to EUREF.

Also see the EPN guidelines

[https://epncb.oma.be/\\_documentation/guidelines/guidelines\\_station\\_operationalcentre.pdf](https://epncb.oma.be/_documentation/guidelines/guidelines_station_operationalcentre.pdf)

#### 2.2 BEFORE STARTING ANY DATA UPLOAD

***It is imperative to contact the responsible person at each of the two regional data centers (BEV and BKG) before doing any data uploads.*** You can find their contact info in: <https://epncb.oma.be/ftp/center/data/BEV.RDC> (for BEV) and <https://epncb.oma.be/ftp/center/data/BKGE.RDC> (BKG).

Please note that

- BKG: sftp is used for data uploads. You need to contact BKG to set up this secure ftp connection before you can start any data upload to BKG
- BEV: ftp is used for data uploads. The data can upload can be done as user "anonymous" and password <your email>, but data upload should only start after receiving confirmation from BEV. BEV can also provide a secure API for uploading data. If you are interested, then contact BEV.

### 2.3 DATA UPLOAD INSTRUCTIONS

BKG: You will receive instructions directly from BKG

- BEV: - ftp gnss.bev.gv.at (user anonymous, password: your email address)
- put RINEX 3 files in /pub/indata or use the API

The BKG and BEV systems will automatically move valid RINEX 3 files to their correct directory.

### 2.4 CHECK IF YOUR DATA HAVE BEEN CORRECTLY SUBMITTED TO THE DATA CENTRE

Look for the submitted data at each data centre (replace YYYY by the year, and DOY, by the Day Of Year)

At BKG:

- For EPN, but non-IGS stations:  
[https://igs.bkg.bund.de/root\\_ftp/EUREF/obs/<YYYY>/DOY/](https://igs.bkg.bund.de/root_ftp/EUREF/obs/<YYYY>/DOY/)
- For EPN and IGS stations:  
[https://igs.bkg.bund.de/root\\_ftp/IGS/obs/<YYYY>/DOY/](https://igs.bkg.bund.de/root_ftp/IGS/obs/<YYYY>/DOY/)

At BEV: <https://gnss.bev.gv.at/at.gv.bev.dc/data/obs/<YYYY>/<DOY>/>

## 3. UPLOADS OF THE HISTORICAL DATA

This concerns the upload of old data prior to the start of the operational uploads to BKG and BEV.

### 3.1 WHAT SHOULD BE UPLOADED?

- Daily RINEX 3
  - o RINEX version 3.03, 3.04, or 3.05 observation files
  - o Use the long RINEX 3 file naming convention as described in section 5 of the RINEX 3 format description (<https://files.igs.org/pub/data/format/rinex305.pdf>)
  - o Hatanaka compress the RINEX observation files (see <https://terras.gsi.go.jp/ja/crx2rnrx.html>)
  - o Use gzip compression before uploading the files
- If RINEX 3 data are not available, then submit daily RINEX 2 files.
  - o RINEX version 2.11
  - o Hatanaka compress the files, followed by 'compress' compression before uploading the files

### 3.2 BEFORE STARTING ANY DATA UPLOAD

Prior to starting any data upload, contact epncb@oma.be as these files have to be manually processed by the EPN CB.



### 3.3 WHERE TO UPLOAD DATA?

Upload the data to

Server: omaftp.oma.be

Directory: incoming/astro/EPNCB

Inform the EPN CB when you finished your data upload or encountered any problems.