

pb2raob

pb2raob reads NCEP PREPBUFR and save rawinsonde observations in a text file. It is based on an [example program](#).

pb2raob extracts rawinsonde observations at mandatory levels on the hour over land on ship. Low quality or processed entries are excluded.

Requirements

pb2raob requires [BUFRLIB](#). pb2raob was written with BUFRLIB 10.2.3.

You may edit Makefile.BUFRLIB to compile BUFRLIB.

Files

- Makefile: edit FC and the BURLIB name and location
- pb2raob.F: mainsource
- readpb.prm: parameter file to be included in pb2raob.F at compile time
- Makefile.BUFRLIB: an example Makefile for BUFRLIB

Usage

The input file name should be prepbufr.in. Rename the prepbufr file or create a symbolic link.

```
$ ./pb2raob
```

The output is written in readpb.out.ADPUPA. It contains station ID, longitude (degE), latitude (degN), pressure (hPa), variable name, observed value. Variables are Q (mg/kg), T (degC), Z (gpm), U (m/s), V (m/s).

Implementation

- Only ADPUPA is read from PREPBUFR (NFILO = 1, iunso = 52, filo = 'ADPUPA').
- Observations not on the hour (DHR ie hdr(4) /= 0) are ignored.
- Rawinsonde observations (TYP ie hdr(6) == 120 (T, q, z) 220 (u, v)) are selected.
- Fixed land and ship observations (T29 ie hdr(7) == 11 and 22) are retained.
- Low quality data (evns(2, lv, jj, kk) > 2.0) and processed data (evns(4, lv, jj, kk) /= 100) are skipped.
- Mandatory levels (evns(7, lv, 1, 1) == 1.0 or 3.0) are saved.