Readme file

Dataset general description

Mixing height estimations are derived from Wind Profiler Radar moments at three sites:

1. Erie (lat: 40.10, lon: -105.04, alt: 1530m),
2. Granby (lat: 40.09, lon: -105.92, alt: 2504m), and
3. Table Mountain (lat: 40.13, lon: -105.24, alt: 1709m).

There is one file for each day. The file name is in the form sidYYDDD.bln, where sid is the site identification (ere for Erie, gnb for Granby, and tbm for Table Mountain), YY is the year (08), and the DDD is the Julian day.

In the files there are two columns. The first is the hour of the day (UTC), the second is the mixing height in km, agl. The data are centered on each hour, i.e., a value at 1900 UTC is an average of data between 1830 and 1930 UTC. Some days have more estimations than others. For some hours it was impossible to accurately identify the PBLH, either because it was not well defined, or the quality of the data was too poor, or there was precipitation. PBLH estimation is performed only for daytime hours (i.e.: between sunrise and sunset). An automated algorithm was run on the wind profiler data. The results were then double checked by-eye to make sure the provided PBLH values are good.

Please, contact the author (Laura Bianco: laura.bianco@noaa.gov) for further questions.

References:

Bianco, L., J. M. Wilczak, and A. B. White, 2008: Convective Boundary Layer Depth Estimation from Wind Profilers: Statistical comparison between an automated algorithm and expert estimations, *J. Atmos. Ocean. Tech.*, **25**, 1397–1413.