CEOP Meteorological Tower Dataset Format Definition

Description

This 30-Minute CEOP Meteorological Tower Dataset contains the meteorological tower parameters reported by each CSE/Reference Site/Station Identifier combination for each height at each date/time. **The CEOP Meteorological Tower data set shall be formed only if more than one observation height is included. If there is only one height of meteorological data it should be included in the CEOP Surface Meteorologogy and Radiation Data Set.** The CEOP Meteorological Tower dataset format contains **9 metadata parameters** and **18 data parameters and flags**. The metadata parameters describe the station location and time at which the data were collected. The time of observation is reported both in Coordinated Universal Time (UTC) nominal and UTC actual time. The UTC actual time is the time of the actual observation. The minutes portion of the UTC nominal time is always 00 or 30. If the UTC actual time minutes are less than 15 or greater than or equal to 45, then the UTC nominal time minutes would be 00, else the UTC nominal minutes would be 30. **The time of observation should be from 00:00 to 23:30 UTC. No times of 24:00 UTC should be reported.** Equations are provided in the Notes sections for each derived parameter. All parameters and flags are space seperated giving **205 characters** in each line (not including the final return character ending each line). Completely missing records should be included. The final CEOP Meteorological Tower output file(s) should follow the CEOP Reference Site Data Set File Naming Conventions, and data records should be sorted by UTC Nominal and Actual Date/Time and then by Latitude/Longitude. The table below details the space separated data parameters and associated flags in each record. Continuous meteorological parameters will be averaged over the 30-minutes prior to the reported observation. The flag values are assigned by the Reference Site, according to the CEOP-specified data flags.

Sample Record

The following is a sample record of the CEOP Meteorological Tower Data. Unlike this example, there are no carriage returns in the data. Thirty minutes worth of data are presented in each record. See the table below for an exact format specification.

```
2001/07/01 01:00 2001/07/01 01:00 LBA        Pantanal        Pantanal        -19.56339   -57.01494 -999.99     0.00
  1003.30 U    25.62 U    16.54 U    57.22 U    11.75 U    2.98 U    38.82 U    -1.87 U    -2.32 U
```

Detailed Format Description

Parameter	C Format	Missing Value	Final Units/Equations/Notes
UTC Nominal Date/Time	16 chars	N/A	yyyy/mm/dd HH:MM, where MM is 00 or 30, only
UTC Actual Date/Time	16 chars	N/A	yyyy/mm/dd HH:MM
CSE Identifier	10 chars	N/A	Fill name with underscores, not spaces.
Reference Site Identifier	15 chars	N/A	Fill name with underscores, not spaces.
Station Identifier	15 chars	N/A	Fill name with underscores, not spaces.
Latitude	f10.5	-99.99999	decimal degrees. South is negative.

Longitude	f11.5	-999.99999	decimal degrees. West is negative.
Elevation	f7.2	-999.99	meters
Sensor Height	f7.2	-999.99	meters; Height of sensor. Positive above ground level. Negative below ground.
Station Pressure	f7.2	-999.99	hPa (mb). **This is the pressure at the reported sensor height**
Station Pressure Flag	1 char	M	See **Flag values**.
Air Temperature	f7.2	-999.99	Celsius
Air Temperature Flag	1 char	M	See **Flag values**.
Dew Point Temperature	f7.2	-999.99	Celsius. **Equations.**
Dew Point Temperature Flag	1 char	M	See **Flag values**.
Relative Humidity	f7.2	-999.99	Percent. **Equations.**
Relative Humidity Flag	1 char	M	See **Flag values**.
Specific Humidity	f7.2	-999.99	g/kg; Note g/kg = (kg/kg)*1000.0. **Equations.**
Specific Humidity Flag	1 char	M	See **Flag values**.
Wind Speed	f7.2	-999.99	m/s. **Equations.**
Wind Speed Flag	1 char	M	See **Flag values**.
Wind Direction	f7.2	-999.99	degrees. **Equations.**
Wind Direction Flag	1 char	M	See **Flag values**.
U Wind Component	f7.2	-999.99	m/s. **Equations.**
U Wind Component Flag	1 char	M	See **Flag values**.
V Wind Component	f7.2	-999.99	m/s. **Equations.**
V Wind Component Flag	1 char	M	See **Flag values**.