

## CTFS-ForestGEO meteorological monitoring METADATA



The CTFS-ForestGEO stations comprise several sensors recorded automatically by a CR1000 datalogger (Campbell Scientific) at 5 min time interval. These sensors include:

- 1) Aspirated and shield temperature and relative humidity sensor plus an additional secondary temperature sensor (MetOne Instruments)
- 2) 2-D sonic anemometer WS425 (Vaisala)
- 3) Tipping rain bucket TB4-L (Campbell Scientific)
- 4) Solar radiometer CMP11 (Kipp&Zonen), plus a secondary radiometer LI-290 (LiCOR biogeoscience)

Data are available in comma separated format after passing a supervised QA/QC. We produce a new file for each year and each station with name XXX\_metdata\_5min\_yyyy.csv, where XXX is a three code site identifier and yyyy is the year.

| Variable      | Unit | 5-min<br>stat | Description                               |
|---------------|------|---------------|---|
| TIMESTAMP     | TS   |               | time in the format mm/dd/yyyy HH:MM       |
| RECORD        | RN   |               | record number                             |
| RadTot_KZ_Avg | W/m2 | Avg           | Solar Radiation Kipp&Zonen                |
| RadTot_KZ_Std | W/m2 | Std           | Solar Radiation Kipp&Zonen                |
| RadTot_Li_Avg | W/m2 | Avg           | Solar Radiation LiCOR                     |
| RadTot_Li_Std | W/m2 | Std           | Solar Radiation LiCOR                     |
| T_Air1_Avg    | C    | Avg           | Air Temperature sensor 1                  |
| T_Air1_Std    | C    | Std           | Air Temperature sensor 1                  |
| T_Air2_Avg    | C    | Avg           | Air Temperature sensor 2                  |
| T_Air2_Std    | C    | Std           | Air Temperature sensor 2                  |
| RH_Avg        | %    | Avg           | Relative humidity                         |
| RH_Std        | %    | Std           | Relative humidity                         |
| WS_WVc(1)     | m/s  | WVc           | mean horizontal wind speed                |
| WS_WVc(2)     | deg  | WVc           | wind direction                            |
| WS_WVc(3)     | deg  | WVc           | Std wind direction                        |
| u_Avg         | m/s  | Avg           | Mean wind in the u direction              |
| v_Avg         | m/s  | Avg           | Mean wind in the v direction              |
| Prec_Tot      | mm   | Tot           | precipitation                             |
| Resis1_Avg    | Ohm  | Avg           | Resistance of temp sensor                 |
| Resis1_Std    | Ohm  | Std           | Resistance of temp sensor                 |
| Resis2_Avg    | Ohm  | Avg           | Resistance of temp sensor                 |
| Resis2_Std    | Ohm  | Std           | Resistance of temp sensor                 |
| Asp_Fan_Avg   |      | Avg           | Number of fan cycles                      |
| BattV_Avg     | V    | Avg           | Battery voltage                           |
| Tbox_Avg      | C    | Avg           | Datalogger temperature                    |
| Batstat_Avg   |      | Avg           | Battery status (1 above 12V, 0 below 12V) |