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Version: 1.0 (Date: 21-Dec-18)

ECraw WUR-MAQ – TR32-CloudRoots

General:

The Meteorology and Air Quality group of Wageningen University (WUR-MAQ) deployed an IRGASON Eddy Covariance system with an additional LiCor7500 IRGA at the TR32-Selhausen site as part of the CloudRoots experiment. *This document describes the raw data*.

Instrument:

Campbell Scientific IRGASON - SN1185 (EC150) – sonic anemometer with integrated IRGA
LiCor7500 - SN0029 – Infra Red Gas Analyzer (IRGA)

Data availability: 06May-13July 2013

Location:

Selhausen.

Latitude: N50 51.954
Longitude: E6 26.840

Installation:

See pictures

- IRGASON:
  - Height: 1.93m
  - Angle with respect to North: 79 degrees
- Licor7500
  - Distance below IRGASON: -24cm

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Data:

- Timestamp is given in UTC

- Data were collected on same datalogger as PAR (photosynthetically Active Radiation) measurements

- Raw 20Hz data (RAW subdirectory) are organized in one txt-file per half hour grouped in daily sub-directories indicated by day-of-year

  - Files do not contain a timestamp. *Timestamp used in the filename indicates the beginning* of the 30min period.
  - Files do not contain a header. The corresponding header is:

"Ux","Uy","Uz","Ts","H2O_EC100","CO2_EC100","CO2cor_EC100","H2O_LiCor7500","CO2_LiCor7500","diag_sonicEC100","diag_irgaEC100","cell_tmprEC100","cell_pressEC100","H2O_sig_strgthEC100","CO2_sig_strgthEC100","diag_irgaLiCor7500","P_LiCor7500

"m/s","m/s","m/s","C","g/m3","mg/m3","mg/m3","g/m3","mg/m3","-","-","C","kPa","-","-","-","kPa"

- Averaged data organized in one file for the whole experiment are available at 1min, 10min and 30min intervals in txt, netcdf, and matlab data formats (SLOW subdirectory):

  - On the datalogger data are already averaged and in post-processing the data are subsequently averaged to larger intervals. This is indicated in the filenames, e.g. *CloudRoots_ECavg_in01min_out10min.txt* where the "in10min" indicates that the a datalogger averaged 01min series was averaged to a 10min series ("out10min").

  - Data are provided with self-explanatory headers which include the variable units"

YYYY,DOY,HHMM,SS,u,v,w,Ts,H2O_EC100,CO2_EC100,H2O_LiCor7500,CO2_LiCor7500,P_Vaisala,P_LiCor7500,P_EC100cell
[-],[-],[-],[-],m/s,m/s,m/s,C,g/m3,mg/m3,g/m3,mg/m3,kPa,kPa,kPa