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

RadSoil WUR-MAQ – TR32-CloudRoots

General:

The Meteorology and Air Quality group of Wageningen University (WUR-MAQ) deployed 4 component net-radiation measurements and two sets soil heat flux measurements consisting of soil heat flux plates and soil thermometers at the TR32-Selhausen site as part of the CloudRoots experiment.

Instruments:

- Radiation
  - Kipp&Zn CM14 (SN980126) – pyranometer – shortwave in- and outgoing radiation
  - Kipp&Zn CG2 (SN980045) – pyrgeometer – longwave in- and outgoing radiation
- Soil-sensors:
  - Hukseflux 4xHFP01SC_05 (SN2434/2435 + SN2436/2437) – soil heat flux plates
  - 6xSoilPt100 - SN40/41/43 + SN48/49/51 – soil temperature

Data availability: 06May-13July 2013

Location:

Selhausen.

Latitude: N50 51.954
Longitude: E6 26.840

Installation:

See pictures

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- Soil sensors were placed under the canopy to the south of the MAQ instrumentation (see areas indicated in pictures)
- Soil-set1 consisting of SFP01SC_05 SN2434/2435 and Pt100 SN40/41/43 was installed towards the east (see area indicated in top two pictures - Note: picture taken towards the south)
- Soil-set2 consisting of SFP01SC_05 SN2436/2437 and Pt100 SN48/49/51 was installed towards the west (see area indicated in bottom two pictures - Note: picture taken towards the south)

Data:

- Timestamp is given in UTC
- Data was measured at 3s intervals and avergaed data was soted with several intervals
- Averaged data organized in one file for the whole experiment are available at 01s, 06s, 1min, 5min, 10min and 30min intervals in txt, netcdf, and matlab data formats:
    - 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_RadSoil_in01min_out05min.txt* where the "in01min" indicates that the a datalogger averaged 01min series was averaged to a 5min series ("out05min").
    - Data are provided with self-explanatory headers which include the variable units

YYYY,DOY,HHMM,SS,Sin,Sout,Lin,Lout,Rn,SHF1a,SHF1b,Tsoil1a,Tsoil1b,Tsoil1c,SHF2a,SHF2b,Tsoil2a,Tsoil2b,Tsoil2c
[-],[-],[-],[-],W/m2,W/m2,W/m2,W/m2,W/m2,W/m2,W/m2,C,C,C,W/m2,W/m2,C,C,C

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Sets	Depth	Variable Names
Set1:		
• SHFP – SN2434	• 60mm	• SHF1a
• SHFP – SN2435	• 55mm	• SHF1a
• SoilTemp – Pt100 SN40	• 20mm	• Tsoil1a
• SoilTemp – Pt100 SN41	• 20mm	• Tsoil1b
• SoilTemp – Pt100 SN43	• 85mm	• Tsoil1c
Set2		
• SHFP – SN2436	• 60mm	• SHF2a
• SHFP – SN2437	• 55mm	• SHF2a
• SoilTemp – Pt100 SN48	• 25mm	• Tsoil2a
• SoilTemp – Pt100 SN49	• 35mm	• Tsoil2b
• SoilTemp – Pt100 SN51	• 75mm	• Tsoil2c