

Organic matter cycling along geochemical, geomorphic and disturbance gradients in vegetation and soils of African tropical forests and cropland - Project TropSOC DATABASE_v1.0

4.3. Meteorological data – High resolution 5 min triggered precipitation data

When using these data, please cite the original publication:

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Introduction

The file comprises a unique station identifier and 6 variables related to triggered precipitation from six meteorological stations. The triggered precipitation data represents the unmodified, but quality checked precipitation data recorded from August 2018 to November 2020. For the geographic locations of the stations please see *410_meteo_locations.csv* and *410_meteo_locations.pdf*.

Data structure

No.	Variable	Explanation	Unit
1	stationID	identification number of the stations as given in <i>410_meteo_locations.csv</i>	-
2	station_name	station name as given in <i>410_meteo_locations.csv</i>	-
3	date_time	date and time of precipitation record	dd.mm.yyyy hh:mm
4	year	year of record	yyyy
5	month	month of record	mm
6	day	day of record	dd
7	pcp	precipitation within specific five-minute interval	mm

Methods

The precipitation sums of a five-minute interval that collected precipitation (tipping bucket tilts) was recorded. Hence, intervals without precipitation are not shown. Please find a list of data gaps that exceed a duration of 30 minutes below (Tab. 1). Figure 1 provides cumulative sums of rainfall intensities to illustrate seasonality and qualitative data validation. Please note that rainfall intensities for Bugulumiza station are low for the period 28.10.2018 to 26.08.2019. **We advise not to use the data recorded for rainfall intensities in this period for Bugulumiza station.** If you so, please handle this period with care, as unusually long periods of low intensities can be an indication for a partly blocked outlet of the rain gauge.

Table 1: Data gaps of triggered precipitation monitoring at six stations.

Station name	Gap start time	Gap stop time
Bugulumiza	01.02.2019 00:05	31.05.2019 00:00
Bugulumiza	10.12.2019 00:00	11.12.2019 23:55
Bugulumiza	28.12.2019 22:35	28.12.2019 23:35
Bugulumiza	18.03.2020 00:00	21.05.2020 23:55
Bugulumiza	13.07.2020 04:30	09.11.2020 06:35
Bukavu	06.03.2018 14:05	25.08.2018 06:45
Bukavu	28.06.2019 07:20	28.06.2019 12:15
Bukavu	08.08.2019 10:30	09.11.2020 06:35
Kibale	06.03.2018 14:05	24.06.2018 17:15
Kibale	26.06.2018 22:25	26.06.2018 23:20
Kibale	07.12.2018 11:35	12.12.2018 15:20
Kibale	12.02.2019 14:05	24.03.2019 11:35
Kibale	24.03.2019 22:30	24.03.2019 23:55
Kibale	10.07.2019 14:10	20.08.2019 15:35
Kibale	18.09.2019 13:35	02.10.2019 14:00
Kibale	14.11.2019 11:35	25.11.2019 11:20
Kibale	21.12.2019 16:45	19.03.2020 11:45
Kibale	25.05.2020 12:15	12.08.2020 09:50
Kibale	29.09.2020 11:25	09.11.2020 06:35
Lukananda	06.03.2018 14:05	28.06.2019 12:15
Lukananda	25.10.2019 19:40	10.11.2019 12:30
Lukananda	10.12.2019 00:00	11.12.2019 23:55
Lukananda	13.07.2020 08:15	09.11.2020 06:35
Walungu	06.03.2018 14:05	20.08.2018 16:55
Walungu	10.10.2018 06:55	17.11.2018 08:15
Walungu	29.12.2018 11:30	29.12.2018 12:15
Walungu	01.03.2019 21:25	06.04.2019 12:05
Walungu	28.08.2019 12:25	30.09.2019 12:20
Walungu	03.03.2020 12:10	25.04.2020 12:35
Walungu	27.06.2020 12:55	31.07.2020 12:05

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