METADATA file for Mountain Lake Biological Station meteorological data

CR10 data logger from 1994 - 2013
CR1000 data logger on line in 2014

Mountain Lake Biological Station

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Metadata file updated: 4 Sep 2025 by JBJ

The Mountain Lake Biological Station is a research and teaching facility of the University of Virginia located in the Allegheny Mountains of southwestern Virginia, U.S.A. (37o22'N, 80o31'W) in a deciduous hardwood forest at an elevation of 1,160 meters.

NOTE ON TIME: All time data is collected in Eastern Standard Time (EST = GMT - 05:00), even during periods of the year when Day Light Saving Time (EDT) is in effect.

LOCATION: Measurements taken at approximately 2.5m above the ground; except for precipitation which is collected near ground level.

NOTE ON RECORD PERIODS: Date are for recording period PRIOR to TIMESTAMP.

30 MINUTE AVERAGE DATA FILE

variable name	units	description
TIMESTAMP	TS	time stamp date (yyyy-mm-dd) time (hr:mn:se.x EST)
	NOTE: TimeStamp is when data are COLLECTED. So value is for time period PREVIOUS to TimeStamp.	
	For daily means then, for example, mean is for day PREVIOUS to TimeStamp.	
RECORD	RN	internal ID
Year	####	Smp year
Date	###	Smp Julian date, 1-365 or 366
Temp	Deg C	Avg mean sensor temperature, C
Temp_Min	Deg C	Min minimum sensor temperature, C
Temp_Max	Deg C	Max maximum sensor temperature, C
Humid	%	Avg mean relative humidity, RH
Humid_Min	%	Min minimum relative humidity, RH
Humid_Max	%	Max maximum relative humidity, RH

Pres	mbar	Smp barometric pressure adjusted for elevation, mbar
Pres_Min	mbar	Min barometric pressure adjusted for elevation, mbar
Pres_Max	mbar	Max barometric pressure adjusted for elevation, mbar
Speed	m/S	WVc mean wind speed, m/s
Dir	Deg	WVc mean wind direction, degrees (0-359) from north
Speed_Max	m/S	Max maximum wind speed, m/s
Rain	mm	Tot accumulated liquid precipitation, mm
hv	mmol/m^2	Avg mean quanta of light, PAR, micromoles/s/m^2
hv_Min	mmol/m^2	Min minimum quanta of light, PAR, micromoles/s/m^2
hv_Max	mmol/m^2	Max maximum quanta of light, PAR, micromoles/s/m^2
T107_C_Avg	no data	
ph	no data	
VWC	no data	
EC	no data	
T	no data	
Cond	no data	
Ct	no data	
Temp_C	no data	
DOppm	no data	

DAILY AVERAGE DATA FILE

variable name	units	description
TIMESTAMP	TS	time stamp date (yyyy-mm-dd) time (hr:mn:se.x EST)
	NOTE: TimeStamp is when data are COLLECTED. So value is for time period PREVIOUS to TimeStamp.	
	For daily means then, for example, mean is for day PREVIOUS to TimeStamp.	
RECORD	RN	internal ID
BattV_Min	Volts	Min minimum battery volts
PTemp_C_Max	Deg C	Max maximum panel temperature, C
PTemp_C_TMx	TS	TMx time stamp time of maximum panel temp
PTemp_C_Min	Deg C	Min minimum panel temperature, C
PTemp_C_TMn	TS	TMn time stamp time of minimum panel temp
Year	####	Smp year
Date	###	Smp Julian date, 1-365 or 366
Temp	Deg C	Avg mean sensor temperature, C
Temp_Min	Deg C	Min minimum sensor temperature, C
Temp_Max	Deg C	Max maximum sensor temperature, C
Humid	%	Avg mean relative humidity, RH
Humid_Min	%	Min minimum relative humidity, RH
Humid_Max	%	Max maximum relative humidity, RH
Pres	mbar	Smp barometric pressure adjusted for elevation, mbar
Pres_Min	mbar	Min barometric pressure adjusted for elevation, mbar
Pres_Max	mbar	Max barometric pressure adjusted for elevation, mbar
Speed	m/S	WVc mean wind speed, m/s
Dir	Deg	WVc mean wind direction, degrees (0-359) from north
Speed_Max	m/S	Max maximum wind speed, m/s
Rain	mm	Tot accumulated liquid precipitation, mm
hv	mmol/m^2	Avg mean quanta of light, PAR, micromoles/s/m^2
hv_Min	mmol/m^2	Min minimum quanta of light, PAR, micromoles/s/m^2

hv_Max	mmol/m^2	Max maximum quanta of light, PAR, micromoles/s/m^2
T107_C_Avg	no data	
ph	no data	
VWC	no data	
EC	no data	
T	no data	
Cond	no data	
Ct	no data	
Temp_C	no data	
DOppm	no data	

KNOWN ERRORS: 2016 Humidity data - for some time leading up to and including 2016 humidity sensor started reading high such that values >100 were common. Data are not corrected but users should be aware of the problem.

End of Metadata file