

FLUXNET synthesis database 2010

List of variables required

To process your data for the new version of the Fluxnet synthesis dataset, data must be submitted before April 30th 2010. There is a number of variables mandatory and others suggested.

Variables **MANDATORY**

These variables are all mandatory. If one of these variables is missing, the dataset will not be processed at all and not included in the dataset.

Decimal day of the year (**DTIME**) or Day, Month, Time

CO₂ flux (**FC** – $\mu\text{mol m}^{-2} \text{s}^{-1}$) **not storage corrected**, **not ustar filtered** and **not gapfilled**

CO₂ concentration top of the tower (**CO2_top** - ppm) and/or storage flux (**SFC** - $\mu\text{mol m}^{-2} \text{s}^{-1}$)

Ustar (**UST** – m s^{-1}) or Momentum (tau)

Global incoming radiation (**RG_in** – W m^{-2}) or PPFD (**PAR_in** - $\mu\text{mol m}^{-2} \text{s}^{-1}$)

Air temperature (**TA** - °C)

Water vapour concentration (**H2O** – mmol mol^{-1}) and/or Relative humidity (**RH** - % [0-100])

TIMESTAMP: please use the timestamp to indicate the end of the halfhour (i.e. first row of the data is January 1st 00:30)

Variables **VERY IMPORTANT**

These variables are indispensable for many activities and if submitted (also part of these) the site will be involved in more activities. For this reason we strongly suggest to submit also these variables. Clearly all the additional variables that you think are relevant can be submitted

Latent heat flux (**LE** – W m^{-2})

Sensible heat flux (**H** – W m^{-2})

Soil heat flux (**G1** – W m^{-2})

Water vapour concentration (**H2O** – mmol mol^{-1})

Relative humidity (**RH** - % [0-100])

Precipitation (**PRECIP** – mm) with the components RAIN and SNOW if relevant

Soil water content (**SWC** - % [0-100]) – also more than one depth

Soil temperature (**TS** - °C) – also more than one depth

Reflected radiation (**RR** - W m^{-2})

Net radiation (**RNET** - W m^{-2})

Diffuse radiation (**RD** - W m^{-2})

Absorbed PAR (**APAR** - $\mu\text{mol m}^{-2} \text{s}^{-1}$) or Fraction of PAR absorbed (**FAPAR** – % [0-100])

Short and Long wave radiation components in and out (**LWin LWout SWin SWout** – W m^{-2})

Wind direction (**WD** – degrees)

Wind horizontal speed (**WS** - m s^{-1})

Air pressure (**PA** – kPa)

Atmosphere stability parameter (**ZL**)

Ancillary information required (**MANDATORY**):

Site name

PI name and email

Policy to apply to the data (“LaThuile”, “Open”, “Free”)

Geographic coordinates (latitude longitude, WGS84, first decimal of second precision (e.g. 44° 27' 52,3”))

Measurement height
Land cover and Land use

Ancillary information VERY IMPORTANT

Management, LAI, Biomass, age etc.... all listed in the BADM file available here:
<http://www.fluxdata.org/DataInfo/default.aspx>

DATA SUBMISSION

Eddy Covariance data

IF your site is part of **CarboeuropelP**, **Carboafrika**, **IMECC** you have to upload the data in the database (<http://gaia.agraria.unitus.it/database>)

IF your site is part of **Ameriflux** you have to send the data to Tom Boden in ORNL

IF your site is part of **Fluxnet-Canada** you have to send the data to the Fluxnet-Canada database

IF your site is not registered in the above mentioned databases but **you are European** or your **site is in Africa or Russia** please contact Dario Papale (darpap@unitus.it)

For all the other cases (Asiaflux, Chinaflux, USCCC, OzFlux, LBA etc.) send the data to Bob Cook in ORNL (ASCII format, with the first line as header using the codes in red above) cookrb@ornl.gov

Ancillary data using BADM can be submitted directly to fluxdata.org (Deb Agarwal daagarwald@lbl.gov)