

ISLSCP II Carbon Dioxide Flux at Harvard Forest and Northern BOREAS Sites

Revision date: September 6, 2011

Summary:

Carbon dioxide flux and meteorological data for the Harvard Forest, MA (1992-95) and BOREAS Northern Study Area, Old Black Spruce (Alberta, Canada; 1994-95) FLUXNET sites are provided as examples of the larger FLUXNET data archive available at the ORNL Distributed Active Archive Center [<http://daac.ornl.gov/FLUXNET/fluxnet.html>]. FLUXNET is a global network of micrometeorological tower sites that use eddy covariance methods to measure the exchanges of carbon dioxide (CO₂), water vapor, and energy between terrestrial ecosystem and atmosphere.

Gap-filled flux data and meteorological data for half-hourly, daily, weekly, monthly, and annual time intervals are presented for each site and year. There are 6 compressed (*.zip) files with this data set.

Additional Documentation:

This data set is one of the products of the **International Satellite Land-Surface Climatology Project, Initiative II (ISLSCP II)** data collection which contains 50 global time series data sets for the ten-year period 1986 to 1995. A complete description of the data, it's derivation, acknowledgements, and references provided by the ISLSCP II Data Management Staff is included with this data set as a companion file named [1_fluxnet_point_doc.pdf](#).

ISLSCP II is a consistent collection of data sets that were compiled from existing data sources and algorithms, and were designed to satisfy the needs of modelers and investigators of the global carbon, water and energy cycle. The data were acquired from a number of U.S. and international agencies, universities, and institutions. The data and documentation have undergone two peer reviews.

ISLSCP is one of several projects of Global Energy and Water Cycle Experiment (GEWEX) [<http://www.gewex.org/>] and has the lead role in addressing land-atmosphere interactions -- process modeling, data retrieval algorithms, field experiment design and execution, and the development of global data sets.

Related Data Sets:

- Falge, E., et al. 2005. FLUXNET Marconi Conference Gap-Filled Flux and Meteorology Data, 1992-2000. Data set. Available on-line [<http://daac.ornl.gov>] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, U.S.A. [doi:10.3334/ORNLDAAC/811](https://doi.org/10.3334/ORNLDAAC/811)
- Additional [ISLSCP II](#) data sets are available from the Oak Ridge National Laboratory Distributed Active Archive Center ([ORNL DAAC](#)).
- Additional data can be downloaded from FLUXNET or regional networks:
 - FLUXNET - <http://daac.ornl.gov/FLUXNET/fluxnet.html>
 - AmeriFlux - <http://public.ornl.gov/ameriflux/Participants/Sites/Map/index.cfm>

Data Citation:

Cite this data set as follows:

Olson, R.J., D. Baldocchi, S. Holladay. 2011. ISLSCP II Carbon Dioxide Flux at Harvard Forest and Northern BOREAS Sites. In Hall, F.G., G. Collatz, B. Meeson, S. Los, E. Brown de Colstoun, and D. Landis (eds.). ISLSCP Initiative II Collection. Data set. Available on-line [<http://daac.ornl.gov/>] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, U.S.A
<http://dx.doi.org/10.3334/ORNLDAAC/1029>

File Information:

The archived data sets for ISLSCP II have been organized by categories. This data set is in the Carbon category.

Data Set Spatial Extent: Global gridded

Westernmost Longitude: -180 W

Easternmost Longitude: 180 E

Northernmost Latitude: 90 N

Southernmost Latitude: -90 S

Projection: Geographic

Data Set Spatial Resolution:

Data Set Temporal Extent:

Data File Format

The data format of the variables in monthly and yearly files is standardized, and contains 3 data types: total (i.e. "tot" - day and nighttime), daytime ("day"), and nighttime ("night"). For each variable either sum or average/minimum/ maximum, percent of gaps filled and standard deviation (S.D.) are provided. The S.D. is the standard deviation calculated from the respective daily sum or daily mean. The data are comma-delimited, missing values are set to -9999. There are six compressed (*.zip) files with this data set called **fluxnet_xx_YYYY.zip**, where xx is the site identifier (HV=Harvard Forest; NB=BOREAS NSA OBS), and YYYY is the four-digit year from 1992-1995:

fluxnet_HV_1992.zip
fluxnet_HV_1993.zip
fluxnet_HV_1994.zip
fluxnet_HV_1995.zip
fluxnet_NB_1994.zip
fluxnet_NB_1995.zip

When extrapolated, each *.zip file contains 20 files for flux data and 5 for associated meteorology data. The data files are named using the following naming convention:

fluxnet_xx_aa_bb_cc_YYYY_flux.csv, for fluxes, and **fluxnet_xx_cc_YYYY_met.csv** for meteorological data.; See the table below:

xx =the site identification	aa = 3 basic data filling methods	bb = the data pre-processing method	cc = the temporal resolution	YYYY = the 4-digit year
HV=Harvard Forest NB=BOREAS NSA OBS	re = nonlinear regression lu = look up tables dc = mean daily courses	u0 = u* corrected u1 = no correction applied	hh = half hourly dd = daily ww = weekly mm = monthly yy = yearly	1992,1993,1994,1995

Please refer to [0_fluxnet_readme.txt](#) for a more complete description of the data files and naming conventions.

References:

Falge, E., M. Aubinet, P. Bakwin, P. Berbigier, C. Bernhofer, A. Black, R. Ceulemans, A. Dolman, A. Goldstein, M. Goulden, A. Granier, D. Hollinger, P. Jarvis, N. Jensen, K. Pilegaard, G. Katul, P. Kyaw Tha Paw, B. Law, A. Lindroth, D. Loustau, Y. Mahli, R. Manson, P. Moncrieff, E. Moors, W. Munger, T. Meyers, W. Oechel, E. Schulze, H. Thorgeirsson, J. Tenhunen, R. Valentini, S. Verma, T. Vesala, and S. Wofsy. 2003. Marconi Conference Gap-Filled Flux and Meteorology Data, 1992-2000. Data set. Available on-line [<http://daac.ornl.gov>] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, U.S.A. [doi:10.3334/ORNLDAAC/811](https://doi.org/10.3334/ORNLDAAC/811)

Data Access:

These data are available through the Oak Ridge National Laboratory (ORNL) Distributed Active Archive Center (DAAC) [<http://daac.ornl.gov>].

Data Archive Contact Information:

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