



# EASY FLUX-PC

## Fully Corrected Fluxes

Datalogger program that computes fully corrected fluxes of CO<sub>2</sub>, latent heat, and sensible heat

### Overview

EasyFlux<sup>®</sup> PC is a free computer program that processes high frequency time series data, collected using a Campbell Scientific eddy-covariance flux system, into fluxes following

community accepted practices. Fully corrected fluxes of CO<sub>2</sub>, latent heat (H<sub>2</sub>O), sensible heat, and momentum are available in generic, AmeriFlux, and GHG-Europe ASCII formats.

### Benefits and Features

- ▶ Intuitive and easy to use; begin processing data in under a minute
- ▶ Uses community tested and reviewed, open source software
- ▶ Supports native Campbell Scientific TOB1 file format collected from an open-path eddy-covariance system (IRGASON or EC150 with CSAT3)
- ▶ Available at no charge

### Technical Description

Provides fully corrected outputs of CO<sub>2</sub> flux, latent heat flux, and sensible heat flux at a user-defined interval (e.g., 30 minutes). Also provides many other variables of atmospheric properties, instrument diagnostics, and intermediate corrections.

#### Default processing:

- ▶ Despike and filter data using sonic anemometer and gas analyzer diagnostic codes, signal strengths, and measurements output range threshold
- ▶ Apply coordinate rotation with an option to use the double rotation method (Tanner and Thurtell, 1969) or planar fit method (Wilczak et al., 2001)
- ▶ Lag CO<sub>2</sub> and H<sub>2</sub>O measurement against sonic wind measurement for maximization of CO<sub>2</sub> and H<sub>2</sub>O flux (Horst and Lenschow, 2009; Foken et al., 2012)
- ▶ Apply low-frequency correction following Moncrieff et al., 2004
- ▶ Apply high-frequency corrections following Moncrieff et al. (1997), Massman (2000, 2001), or Horst (1997)
- ▶ Correct sonic temperature for the effect of humidity following van Dijk et al., 2004
- ▶ Apply correction for air density fluctuation using Webb et al., 1980
- ▶ QA/QC data quality checks following Foken (2003)

For comprehensive details, visit: [www.campbellsci.eu/easyflux-pc](http://www.campbellsci.eu/easyflux-pc) 