Powerful. Intuitive. Flexible.

EddyPro™ 3.0 is a powerful software application for processing eddy covariance data. It computes fluxes of momentum, carbon dioxide, water vapor, methane, and other trace gases with the eddy covariance method. Building upon the success of the initial release (EddyPro Express), EddyPro adds multiple advanced options to fit a wide variety of sites and systems. EddyPro still maintains the simplicity and ease of EddyPro Express by providing two processing modes. In Express Mode, EddyPro quickly processes data with commonly used processing selections. In Advanced Mode, a large variety of choices are provided for researchers who need flexibility and control over the data processing options. EddyPro is specially optimized for data collected in LI-COR GHG formats from LI-COR Analyzers.

Why EddyPro™?

- Built on the proven IMECC* platform; Results validated against EdiRE and other commonly accepted flux processing software tools
- Extensive data processing options (see descriptions on back)
- Intuitive interface - Easy to learn & simple to use
- Integrated online help with video tutorials
- Seamless processing of LI-COR GHG files (.ghg files are raw flux data files, collected by LI-COR Analyzers, compressed and zipped with a corresponding metadata file)
- Support for multiple raw data formats (Generic ASCII, Generic Binary, TOB1, SLT)
- Output includes fluxes, quality flags, footprint estimations, full and binned spectra, co-spectra, binned Ogives
- Data output is compliant with GHG-Europe and AmeriFlux standard data submission formats
- Backed by the LI-COR Technical Support team

*Infrastructure for Measurements of the European Carbon Cycle
Data Processing Options in EddyPro™ 3.0 (Express Mode selections in italics)

**Axis rotation for sonic anemometer tilt correction**
- Double rotation
- Triple rotation
- Sector-wise planar fit (Wilczak et al. 2010)
- Sector-wise planar fit with no velocity bias (van Dijk et al. 2004)

**Detrending of raw time series**
- Block averaging
- Linear detrending
- Running mean
- Exponentially running mean

**Compensation of time lag between sonic anemometer and gas analyzer measurements**
- Maximum covariance with default (circular correlation)
- Maximum covariance without default
- Constant
- None (Option to not apply compensation)

**Statistical tests for raw time series data**
- Spike count/removal
- Amplitude resolution
- Dropouts
- Absolute limits
- Skewness and kurtosis
- Discontinuities
- Time lags
- Angle of attack
- Steadiness of horizontal wind
- None (Option to not apply tests)

**Available outputs**
- Full (rich) output with fluxes, quality flags and much more (standard format or available results only)
- AmeriFlux format
- GHG Europe format
- Raw data Statistics
- Full Length Spectra and Co-Spectra
- Binned Spectra and Co-Spectra
- Binned Odives
- Details of steady state and turbulence tests
- Details of steady state and turbulence tests
- Raw data time series after each statistical tests/correction

**Compensation of gas analyzer measurements for density fluctuations**
- Webb et al., 1980 (open path) / Ibrom et al., 2007 (closed path)
- Use (or convert to) mixing ration (Burba et al. 2011)
- Optional off-season uptake correction for LI-7500 (Burba et al. 2008)
- None (Option to not apply compensation)

**Correction for frequency response (attenuation)**
- Analytic high-pass filtering correction (Moncrieff et al., 2004)
- Low-pass filtering, select and configure:
  - Moncrieff et al. (1997)
  - Horst (1997)
  - Ibrom et al. (2007)
  - Horst and Lenschow (2009)

**Quality control flags for computed fluxes**
- Tests according to Mauder and Foken (2004)
- Flagging according to Foken (2003)
- Flagging after Göckede et al. (2006)

**Flux footprint estimation**
- Sonic temperature correction for humidity following van Dijk et al. (2004)
- Spectroscopic correction for LI-7700 following McDermitt et al. (2010)
- Angle of attack corrections

**References:**


