AmeriFlux Data System

Welcome to the AmeriFlux website!

The AmeriFlux Network, sponsored by the U.S. Department of Energy, gathers data from the largest existing sites in the atmospheric research community. The network provides a unique opportunity to monitor and understand the biological, chemical, and physical processes that govern the carbon cycle and climate. Data from the network is available to scientists and the public, and the network is expanding its coverage to include additional sites.

Ameriflux.lbl.gov
Data Submission Path

Web services provide underlying access and interaction between components
AmeriFlux Data Submission Status

# AmeriFlux sites L2

![Bar chart showing the number of AmeriFlux sites L2 from 1991 to 2013.](chart.png)
Data Team Recent Accomplishments

• AmeriFlux web portal upgrades
  – Data search and availability
  – Community blog
  – Announcements
  – All AmeriFlux data uploads via portal or automated
  – System for archiving level 0 data from sites

• New BADM protocol version building on prior version,
  – New site general information, Disturbance, and VegCover, and instrument sheets available
  – Able to send filled in templates to PIs for updates

• Data level 4 processing under way
  – Postdoc position interviews underway

• Standardization with ICOS
AMP Data Processing Activities

- Extensive collaboration with ICOS (shared code repository and computing resources)
- Joint development of new processing methods and code
  - Extended data QA/QC, with exchanges with PIs for individual sites
  - New data filtering, including methods developed in NACP (e.g., Barr et al. Ustar)
  - New uncertainty estimation
  - Improvements to and hardening of flux partitioning methods
- More details on the Weds Data Mini-Workshop
AMP Data Processing Activities
Recently Initiated Efforts

• Raw data processing
  – Centralized and standardized raw data processing (flux calculations)
  – Wider range of fluxes calculation and correction methods for uncertainty estimation

• Creation and release of frozen versions
  – Processing code
  – Data sets

• Footprint calculation
Steps for Submitting Raw Data

• Submit a completed BADM instrument sheet
• Provide sample raw data files along with associated sample processed 30 min data
• Choose a data file upload approach with AMP Staff
• Begin uploading raw data
• We will be automating raw data processing and feedback to contributor over the next year
Data Variable Names

• Standardizing with ICOS the variable naming convention
• Var_xy_z_r
  – Var – variable short name (e.g. TA, SWC, etc)
  – xy – numbers the sensors of the same type in the same horizontal plane
  – z – numbers the sensors of the same type in the vertical plane
  – r – numbers the replicas installed at the same place
• Naming for data products (gap fill, QA/QC, etc) still to be decided.
• The list of standard Variable names will be released in the next few months.
Web Site Tour

• Demo