

Poster #1-71

AmeriFlux Data Processing and Interface Improvements

Danielle Christianson^{1*}, Housen Chu², You-Wei Cheah¹, Gilberto Pastorello¹, Yeongshnn Ong¹, Fianna O'Brien¹, Dario Papale³, Marty Humphrey⁴, Deb Agarwal¹, and Margaret S Torn¹

¹Lawrence Berkeley National Laboratory, Berkeley, CA

²University of California, Berkeley, Berkeley, CA

³University of Tuscia, Viterbo, Italy

⁴University of Virginia, Charlottesville, VA

Contact: dschristianson@lbl.gov

BER Program: TES

Project: AmeriFlux Management Project

Project Website: <https://ameriflux.lbl.gov>

The AmeriFlux Management Project (AMP) Data Team offers a wide array of services to the flux tower teams and data users including: an archive, QA/QC processing, DOIs, and standardization of flux and meteorological data. In this poster, we introduce recent advances that are described below.

The AmeriFlux Data Team QA/QC data-processing pipeline accepts data in the new standardized half-hourly flux data submission format (called FP-In). Automated QA/QC checks are performed and results are communicated with flux-tower teams via on-line reports and a customized issue tracking system. After successfully passing the QA/QC assessment, the data is published in the FP-Standard half-hourly format. This standardization allows automation of the data processing which has resulted in rapid turn-around of processing and feedback to data submitters. In addition, the standard format significantly expands the number and types of variables included in the data submissions and data products. Over 50 sites have successfully submitted data in FP-In format, and the data are available on the AmeriFlux website. Flux-tower teams can track their site's data processing status via a new page on the AmeriFlux website. The AmeriFlux QA/QC assessment incorporates many of the checks that were developed in the production of the major synthesis data release, FLUXNET2015. The FP-Standard data output from the AmeriFlux QA/QC data processing will be ready for gap-filling, partitioning, and the next generation of FLUXNET processing. For more information on the data standards and services, see ameriflux.lbl.gov and ameriflux.lbl.gov/data/aboutdata/data-variables/.

The Biological, Ancillary, Biological, and Metadata (BADM) templates, used to organize and share non-flux data from tower sites, continue to evolve. The BADM web submission and update interface allows tower teams to easily provide incremental data submissions and corrections of the site general information BADM data (ameriflux.lbl.gov/data/badm-data-templates/). We have updated the vegetation cover and soil BADM templates and are testing new interface formats to improve the ease of collecting and submitting BADM data. In addition, we developed a new web tool for submitting height and instrument model information for flux-met data. This tool also maps historical data formats to the new FP-In format. The data team is continually working to improve the flux-tower PI and user experience in AmeriFlux, and thus the usage of flux data in synthesis as well as the breadth, quantity, and quality of the data available from AmeriFlux.