

**Poster #9-40****Scaling AmeriFlux Data Activities to Support Network Growth**

Danielle S. Christianson<sup>1\*</sup>, You-Wei Cheah<sup>1</sup>, Housen Chu<sup>1</sup>, Gilberto Pastorello<sup>1</sup>, Fianna O'Brien<sup>1</sup>, Yeongshnn Ong<sup>1</sup>, Dario Papale<sup>2</sup>, Makayla Shepherd<sup>1</sup>, Marty Humphrey<sup>3</sup>, Deb A. Agarwal<sup>1</sup>, and Margaret S. Torn<sup>1</sup>

<sup>1</sup> Lawrence Berkeley National Laboratory, Berkeley, CA;

<sup>2</sup> University of Tuscia, Viterbo, Italy; and

<sup>3</sup> University of Virginia, Charlottesville, VA

Contact: [dschristianson@lbl.gov](mailto:dschristianson@lbl.gov)

BER Program: TES

Project: AmeriFlux Management Project

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

The AmeriFlux Management Project (AMP) Data Team offers diverse data services to AmeriFlux flux-tower teams and data users including: high-frequency data storage, QA/QC processing, DOIs, and standardization of flux and meteorological (flux-met) data. The network has over 400 sites, with more than 200 actively contributing data. In this poster, we highlight efforts to meet increasing demand for AmeriFlux data services, primarily QA/QC processing of flux-met data and supporting Biological, Ancillary, Biological, and Metadata (BADM).

Providing standardized, QA/QC'd flux-met data to the Earth science community is a core data service. The AmeriFlux BASE data-processing pipeline accepts flux-met data in a standardized half-hourly 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, data are downloadable from the AmeriFlux website as the AmeriFlux BASE data product. We continue to add automation to the data-processing pipeline, including same-day online preliminary feedback to flux-tower teams. Teams can further track their site's data-processing status via a tool on at [ameriflux.lblo.gov](http://ameriflux.lblo.gov). In addition, the BASE product follows the FP-Standard format, which significantly expands the number and types of variables included in data submissions and products. Data users will soon be able to search over 1750 sites years (from over 250 sites) of BASE data by variable name and year on the updated AmeriFlux Site Search webpage. New figures summarizing the data are also in progress. The AmeriFlux BASE data product is processed further, including gap-filling and flux partitioning, by ONEFlux, the next generation of FLUXNET processing (see poster by Pastorello et al.).

The BADM templates, used to organize and share non-flux data from tower sites, continue to evolve. The BADM Web interface allows flux-tower teams to easily submit or update site general information BADM. The new Variable Information online tool has been used by over 75 tower-teams to provide height and instrument-model information that is shared via the new Measurement Height data product. We are upgrading the 15-year-old BADM infrastructure to enable QA/QC processing of BADM similar to flux-met data. As part of this process, we are developing new submission interfaces collaboratively with flux-tower teams. The AmeriFlux data team continually works to improve the flux-tower team and user experience and to increase the breadth, quantity, and quality of AmeriFlux data available for synthesis and analysis to address today's science challenges.