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AmeriFlux Data Product and Interface Improvements

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The AmeriFlux Management Project (AMP) Data Team concentration is on providing high-quality, consistent data products from across the flux towers in the Americas. The data team provides a wide array of services to the flux tower teams and data users including: an archive, QA/QC processing, DOIs, and standardization of flux data. In this poster, we will introduce some of the recent advances that are described below.

The AmeriFlux Data Team is developing a new, expanded QA/QC data-processing pipeline and a new standardized half-hourly flux data submission format (called FPin). The new QA/QC pipeline accepts data from flux-tower PIs in FP-in format and produces data in the FP-Standard half-hourly format (these standard formats were developed over the past year, in a collaboration between AmeriFlux and European Flux networks). This standardization is now allowing automation of the data processing and will enable rapid turn-around of processing and feedback to data submitters. In addition, the standard format provides a means for individual sensors to be included in the data submissions and data products. The AMP data team is working with flux-tower teams to convert their data to the FP-in format. We are also working with CDIAC to convert data from inactive AmeriFlux sites to the standard format. On the order of 45 inactive sites have been translated so far and approximately 20 are still in progress. The new QA/QC processing incorporates many of the checks that were developed in the production of the major synthesis data release, FLUXNET2015, and the FP-Standard data output from the new QA/QC processing will be ready for gap-filling, partitioning, and the next generation of FLUXNET processing.

The Biological, Ancillary, Biological, and Metadata (BADM) templates, used to organize and share non-flux data from tower sites, continue to evolve. The new BADM web submission and update interface allows tower teams to easily provide incremental data submissions and corrections of the site general information BADM data. Our next step is to update additional BADM templates like veg cover and soil. In addition, we are working on new submission formats to improve the ease of collecting and submitting BADM data. In concert with the transition to the FP-Standard format, BADM are being used to collect detailed information about sites' instrument installations. An additional upcoming innovation is a file tracking interface that will enable users to track data submission and processing status. We will provide an update regarding the work to develop new partitioning and gap filling. The data team is continually working to improve the flux-tower PI and user experience within AmeriFlux, and thus the usage of flux data in synthesis as well as the breadth, quantity, and quality of the data available from AmeriFlux.