

## **A long-overdue gap-filled and partitioned flux dataset for nearly 300 AmeriFlux and NEON sites**

Despite the great value of the AmeriFlux and NEON data, the lack of gap-filled and partitioned flux data across these sites for recent years has hindered the progress of many synthesis, scaling, remote sensing, and modeling studies. To meet the needs of two on-going research projects, I recently developed a gap-filled, partitioned flux dataset for nearly 300 AmeriFlux and NEON sites. The gaps of the meteorological data were filled with meteorological data, and the flux measurements were gap-filled and partitioned using standardized procedures. For each site, the data cover a part of or the entire period from the early 1990s to 2021.

The original AmeriFlux and NEON data were obtained from the AmeriFlux website (<https://ameriflux.lbl.gov/>). For AmeriFlux sites, only those sites with open access policy were chosen.

Prior to partitioning, I used met data to fill the gaps of flux tower met data. The data are at half-hourly time step. I haven't gotten a chance to aggregate the data to daily time step. There are ~290 sites. For a small fraction of the sites (~23), the software was not able to generate GPP estimates; therefore, the number of columns is not completely the same among sites. The variables that you may need are: Year, DoY, Hour, NEE, LE, H, Rg, Rg\_QC, Tair, Tair\_QC, Tsoil, rH, rH\_QC, VPD, VPD\_QC, P, P\_QC, NEE\_uStar\_f, NEE\_uStar\_fqc, Reco\_uStar, GPP\_uStar\_f, GPP\_uStar\_fqc. You can use R, Matlab, or another package to extract the columns you are interested in for each site. Please explore the data and see if there are any issues.

I am swamped with other obligations now, and don't have time to write any documentation. But this link can give you a basic idea about most of the variables: <https://www.bgc-jena.mpg.de/bgi/index.php/Services/REddyProcWebOutput>.

Please let me know if you plan to use the data in any presentation or manuscript. Contact: Dr. Jingfeng Xiao ([j.xiao@unh.edu](mailto:j.xiao@unh.edu)).