



Evaluation of global land surface models with empirically derived products from FLUXNET: Dos and don'ts

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Global gridded products of carbon and energy fluxes derived from FLUXNET data have recently become available. These products were generated by combining flux data with remotely sensed vegetation properties, and meteorological data using a machine learning algorithm. These products are increasingly used to evaluate global land surface models. However, depending on the flux of interest (e.g. gross primary production, terrestrial ecosystem respiration, net ecosystem exchange, evapotranspiration) and the pattern of interest (mean annual map, seasonal cycles, interannual variability, trends) the robustness and uncertainty of these products varies considerably. To avoid pitfalls, this talk aims at providing an overview of uncertainties associated with these products, and to provide recommendations on the usage for land surface model evaluations. Finally, we present FLUXCOM - an ongoing activity that aims at generating an ensemble of data-driven FLUXNET based products based on diverse approaches.