



Three years of Large Aperture Scintillometer measurements over a patchy savanna in West Africa

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In the context of the West African Monsoon, energy balance at the surface is expected to play a major role, but turbulent fluxes are often difficult to monitor over long period with sufficient accuracy. Within the framework of the "AMMA-CATCH" program, a Large Aperture Scintillometer (LAS) has been installed over a small catchment (12 km²), located in the north of Benin, a region exposed to sudanian climate.

This presentation will focus on the methodology we applied to derive the sensible heat flux from scintillometer measurements. For this, we need to characterize the annual cycle of aerodynamic parameters. Footprint analysis has been carried through to precise the aggregation of local parameters needed in the computation of H.

Then, the result of a three years time series of sensible heat flux will be presented and analysed. It is compared to local and aggregated net radiation measurements to analyse the energy balance partition.

For the first time, we dispose of a full year time series of aggregated sensible heat flux, which can provide a complete annual cycle of AET at hour scale.