

Interactive comment on “Analysis of the energy balance closure over a FLUXNET boreal forest in Finland” by J. M. Sánchez et al.

Anonymous Referee #1

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The authors of this paper analyzed the imbalance in the energy balance that is often observed with eddy covariance and radiation measurements in forests. This is a relevant topic for HESS. There are many forest sites in the world (in Brazil, Russia and Europe. . .) where similar measurements take place. The issues addressed in this paper are relevant for all these sites. The instrumentation and the tools that were used to estimate the energy balance themselves are not new (they are part of the FLUXNET network), but the very systematic way in which they are analyzed is a welcome new contribution. The authors address the effects of different storage components (in the soil and in the air column below the sensors) and other effects: low u^* , stability, footprint and the averaging time on the eddy covariance measurements. All these effects are addressed one by one, and the results are compared to the literature. The contribution of each of them to the energy balance error becomes clear, as well as their

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joint effect. This paper is relevant, well written and clear. I do not find that the text that needs further revision or clarification, and I recommend accepting it as it is.

These are very minor: typo 1: Table 3, caption. Include a white space between G' and '(top line)' typo 2: References (2698, L 16): replace the '.' after Col by a ','

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