

Interactive comment on “Eddy Covariance flux measurements with a weight-shift microlight aircraft” by S. Metzger et al.

Anonymous Referee #2

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The paper presents a new approach to measure spatial averaged turbulent fluxes with a weight-shift microlight aircraft (WSMA). A fact that spatial averaged data can help to explain unclear effects related with heterogeneous terrain (like elevated non-propagating eddies), which are not possible to be capture with classical eddy-covariance (EC) tower, is a rationale for developing of such systems. The results of WSMA measurements collected during a field campaign are compared with tower EC and large aperture scintillometer data. The paper is very well documented, and many aspects of turbulence measurements, data processing and analysis are extensively discussed on high scientific level. A methodology of platforms comparison is so comprehensively explained that it can be used a guide by other groups for developing airborne systems. All this arguments justify publication of the presented paper in Atmospheric Measurement
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Techniques.

I do not find many specific comments to the paper. It is in general well organized, but in my opinion, authors could consider to join "Results" and "Discussion" as I have an impression that there are some repetitions in both sections. I also think, that spectrum at Fig. 3 could be presented in form $fS(f)$ (as it is at Fig. 5) rather than $S(f)$ – it would allow not only to compare both spectra but also give information on integral length scale measured by both methods. However, I think that above remarks are not really important for the paper quality and it can be published in the present form if authors decide not to meet them. English seems to be good enough, but as not a native speaker I am not able to evaluate this.

Interactive comment on Atmos. Meas. Tech. Discuss., 5, 2591, 2012.