

## ***Interactive comment on “Towards a consistent eddy-covariance processing: an intercomparison of EddyPro and TK3” by G. Fratini et al.***

**Anonymous Referee #1**

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The eddy-covariance (EC) method is the most direct and accurate way to estimate turbulent fluxes of momentum, mass and energy. In spite of a simplicity of the main idea of the method, its practical application needs advanced instrumentation and an experience in data processing. One of the open problems in EC applicability is estimation of the uncertainty of the calculated fluxes. The differences in data processing procedures are one of the potential sources of these uncertainty. The paper focus on comparison of two software packages used in EC flux calculation: EddyPro and TK3. For the comparison, the authors used two about one-month long data sets: one from closed-path and one from open-path measurement system. So, the subject is exactly in the scope of AMT. I also think that scientific relevance of the problem justify publication. The paper is clear and well organised and, in my opinion, it should be published

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after minor changes only.

My only one remark concerns conclusion that researchers should use an established software only to get good results (p. 2108, lines 17-21 and p.2120, lines 1-3). I do not understand either why authors warn against software intercomparisons and usage in-house scripts. It was not discussed in the paper. An in-house script can be much more convenient and effective if it is oriented on specific measurement system. The established software packages could be a good tool to verify it. The paper rather show that even these popular packages must be very carefully tuned (including code modifications!) to get comparable results. So, I think that the main conclusion is that as long as there is no only one widely accepted software (if ever will be) the very detailed information on ‘processing scheme’ and ‘processing steps’ ( in the sense introduced in the paper) is essential. Moreover, the comparison of the results given by a software used by any group with the results given by the ‘reference’ software could be very helpful in flux comparisons.

I also suggests to reconsider sentences in lines 4-6, p. 2112. Even if EddyPro is free, the phrases: “rapidly increasing world-wide”, “comprehensive”, “user-friendly” sounds a bit commercial for me.

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