Referee report of acp-2014-536
Estimating local atmosphere-surface flues using Eddy Covariance and numerical Ogive optimization

The authors have done a good job answering my comments to the original submission. I recommend accepting this paper. I find the paper interesting and hope this method will be evaluated also by other groups.

I just have a few additional comments and suggestions for technical corrections before the final publications which the authors and editor may consider.

1. I suggest shortening the title to: "Estimating surface fluxes using eddy covariance and numerical ogive optimization". In my opinion labeling the fluxes "local atmosphere-surface" is superfluous.

2. Page 3, line 19-20: Here I would like to see a sentence on examples of the "certain conditions" when horizontal low-frequency contributions are significant (from Yi et al. and Zeri et al). It would improve the reader not accessing these papers just to get these examples.

3. Page 7, line 10: comment: the noise you are referring to must be correlated between the scalar and the vertical wind speed signals in order to contribute to the co-spectra/fluxes. Random white noise would generally not contribute to your flux estimate.

4. Fig. 2 and 5-10, 13: legend, Change "Wind-origin" to wind direction. The meteorological convention for wind direction is defined as the direction from which the wind is coming from.

Additionally for Fig. 5-10, consider shortening the figure captions. These could possibly be shortened to "as Fig. 2 but…" and then specify conditions separating these cases from fig. 2.

I suggest a similar change for the caption to Fig. 12.

5. Fig. 12 I would suggest a relabeling of the x-axis to zL^{-1} instead of "atmospheric stability".