Respond to Referees

Thanks for Editor comment and marked errors, We made revisions point-by-point based on Editor advising.

Respond to Editor:

Comments to the Author:

Please comment on how your stationarity definition/test fits in with the well-used methods of Foken et al. (1996). Tools for quality assessment of surface-based flux measurements. Agricultural and Forest Meteorology.

The kernel of method of Foken et al. for quality assessment of surface-based flux measurements is 'conditions of the stationarity of the data, the homogeneous underlying surface, a fully developed turbulence'. However, the goal of this study is to test the ergodicity of the observed eddies including the data of non-stationarity and heterogeneity. So that the principle of selecting data is that the inaccurate data in measurement only are deleted. Therefore, 'firstly, the inaccurate data in the measurements caused by spike are deleted before data analysis.' 'In order to delete further the abnormal inaccurate data, the 12 fragments of 5-min variances of the velocity and temperature in 1-hour are calculated and compared with each other. The data that deviations are less than $\pm 15\%$ including the instrumental error about $\pm 5\%$ are selected.' It is different from the methods of Foken et al. (1996) in physic viewpoint. In fact, the data of 30 min and 60 min in temporal scale may be including information of heterogeneous surface in this study.

The English grammar is still unacceptable and will need to be improved during the copy-editing process

We do the best one can improve presentation quality during the copy-editing process, of course to hope your help for us.

In abstract MOST is not defined

line 130 define tau'

line 183 "isotropous" should be "isotropic"

line 195, I do not understand what "we set by the strong arm not needing part of frequencies" means. Please re-write

line 209, subsection title use MOS, not M-O, please be consistent throughout the document (sometimes the authors use MOST as well)

Please reference the original MOS paper

line 228, please provide a reference for the specific form of Eq 12 or start from the more general form of L and show how 12 is arrived at. Please define rho_d

line 262 and 266, please report both roughness length (zo) and displacement length (d) or just zo

line 266, Martano 2002 should be Martano 2000, please fix

line 268, "circuit pulse" should be "spike", Is your despising routine similar to Vickers, D., & Mahrt, L. (1997). Quality control and flux sampling problems for

tower and aircraft data. Journal of Atmospheric and Oceanic Technology, 14, 512–526.

How long was complete data set used to compute the planar fit? Was it long enough? Please clarify

We have revised above faults point by point.

I do not understand your reason for not applying the WPL correction. Please clarify and explain.

The Webb correction (Webb et al. 1980) is the component of surface energy balance in physical nature, but not the component of turbulent eddy. However, this study is to analyze the ergodicity of turbulent eddies. According to our preliminary analysis about the ergodicity of turbulent eddies, such correlation may also cause the unreason deviation from the prediction shown in Eq. (14). We thus do not perform Webb correction on our research objectives of the ergodicity.

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Thanks Referees for affirmation of our work.

The discussion in this paper is an extension, and the conclusion doesn't include the content of discussion. Therefore, the discussion section has now been moved after the conclusion section.