

Interactive comment on “An airborne regional carbon balance for Central Amazonia” by J. Lloyd et al.

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This is a well written paper that contributes significantly to the discussion whether the carbon balance of Amazonian forest is neutral or is biased towards substantial uptake. It is rather unfortunate that there are only a few measurements (5-6 for day and night) available in a single season, but the results are sufficiently sound and solid to cast doubt on current eddy covariance based estimates of the carbon balance. I do have a feeling that the authors are trying to make up for this small number of observations by providing a rather exhaustive discussion. Maybe that could be checked and written in a more economical style. Also, I would appreciate if an uncertainty analysis of equation 1 could be performed. This would help showing that for instance your estimates of vertical velocity you are using does not bias the result to much.

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The paper definitively needs to be published, the question somehow being how to attract as wide a readership as possible.

Some minor comments

There are still some minor typos. A spelling check would help. Page 4. under material, the phrase we used" is rather repetitive given the introduction above. Page 5 middle please use m3 units It is a little unclear what the error band on the tower represents. I assume this relates to the variability between days and not to those between towers? How large is the latter? Page 12. The term flux loss is not quite appropriate. It is not lost, at the most it is not observed by the EC systems. Page 14. Middle paragraph is hard to follow. "would have been reversed any drainage"? Page 13-14 It would help to show that in conditions of higher than above turbulence (provided you can find them in the data) the nighttime EC rates are comparable to yours.

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