

**Editors review of paper acp-2013-378: Land surface controls on afternoon precipitation diagnosed from observational data: uncertainties, confounding factors and the possible role of vegetation interception  
by Guillod et al.**

Dear author, co-authors,

I have checked carefully your response to the reviewers comments as well as the revised version of the ms. Based on this I decided to invite one of the reviewers, who suggested major revisions, to check again the revised version to secure that the comments/suggestions for improvements have all been properly addressed. In addition, reading myself the revised version I came across a number of issues that require some further editing of the text. You can find these comments/suggestions below. Making the observation that there were still quite some textual issues found in the revision, I would anyhow suggest to once more again check the ms critically (for example by a native English speaking colleague) to improve further the overall readability of the paper.

Regards, Laurens Ganzeveld

Abstract, lines 18-19: "This also highlights the difficulties in statistically isolating a coupling. Regional analyses point to contrasting mechanisms over different regions". This sentence is not correct, modify.

Introduction, line 53: suggest to change this to "Precipitation impacts soil moisture by replenishing soil **moisture reservoir**"

Line 134: "closest to local 3 h": I guess you want to express here closest to a local time of 3PM (or 15 h)?

Line 142: "Its key characteristic is that it successfully assimilates high-quality precipitation observations into the atmospheric analysis, contrary to other reanalyses. This thus possibly allows for a more realistic representation of land hydrology and land-atmosphere interactions". I think that such a strong statement on the added value of this reanalysis product requires further confirmation by at least including a reference that has demonstrated this fact.

Line 321: CTP and Hllow (the Convective Triggering Potential and a low-level Humidity Index); in order to make the ms also readable/easy to interpret by readers not informed about the details given in de Findell study; at the risk that your paper is already quite long would it be possible to explain the meaning of these parameters in an additional 1-2 sentences so that their relevance for the presented study is clear? This is also relevant since it is described that these parameters were not available in the presented study and resulting in the calculation of an alternative TSF to be compared with Findells TSF that included those parameters besides the EF.

Reading over the first part of the text of section 3.2 I got the impression that this explains exactly the events you want to identify and for which you also need to determine this CTP parameter. For that, I suggest to put this statement before you provide some of the details on the followed methodology as described in the previous section.

Lines 402-405: “We note that inspection of the NEXRAD time series reveals suspect features (not shown) for three sites in the middle of the Western regio”; This statement triggers the question what you mean with suspect features; and it is clear what you exactly refer to than it would also be more clear what the broader consequences could be of potential issues regarding this dataset. Would there be other sites with problems in these data that you have not directly noticed?

Reading over the explanations for some of the issues on the interpretation of the TFS, you already start to explain here why the methods might provide different information and already indicating that it can be questioned if the FLUXNET data are, for example, suitable for the presented analysis ; This should according to me be included in the discussions.

Line 463: “First, the footprint of the EF is different....”

Line 464: “but also from differences in land cover”

Lines 472- : “In order to better characterize the EF time series, Fig. 6 shows the mean, standard deviation, and persistence (quantified by the decorrelation time-scale, ...”. Since this issue of persistence in the signals is quite important and analysed in depth hereafter I think it would be very useful to shortly explain here what you mean exactly with persistence, in addition to the already included description of how you quantify it. You express that this persistence plays an important role in this analysis of the TFS\*; what are the conditions/data that you would like to filter out in this analysis? I think that this would really facilitate interpretation of the following analysis of the signals also for readers less introduced into the details of the presented study. You actually provide some hints on this at the end of section 5; lines 541 - ... Similar to my previous comment; this part of the analysis could benefit from already putting this more clear description of what kind of conditions/role of processes, exactly you want to identify when you introduce the term persistence for the first time.

Line 551: “in the context of forecasting”; forecasting of what, of the EF or of weather in general??

Line 732: “as the time interval decreases from daily...” It seems that this sentence is not finished.