Review: Liang et al., MOFLUX site, soil respiration

In general, the authors have addressed my main points from the initial review. This paper can be published, with the minor comments from below addressed. I do not need to see this paper again.

Specific comments:

Page 6, last line: It looks to me like C+H overestimates SMP when moisture is ***below*** 15% for depth below 30cm.

Page 10, line 4: There is no range on the GPP plot of Figure S5. Also, it looks like SR and GPP plots are reversed (a and b) when compared to their referencing in the text.

Page 12, line 5: "First, the Hanson Model significantly increased GPP." This is an incorrect statement. The Hanson model does not calculate GPP. The Hanson model determines SMP, and SMP is related to GPP through the ability of the model to capture soil moisture for use in transpiration. Interestingly, The Hanson SMP is only higher than the C+H SMP in the top 30cm of soil when VWC is < 15%. Everywhere else (top 30 cm, VWC > 15%, all VWC below 30cm) the Hanson SMP value is below (larger negative) than the C+H (Figure 1). What this says to me is that ELM transpiration (and GPP) is critically dependent on soil moisture in the upper 30 cm of the soil, and this upper soil is frequently at VWC below 15%. There should be some discussion of this. Do you think this result is realistic? What this is saying is that trees in the American Midwest are not at all dependent upon soil moisture below 30cm in the soil. Do you believe that to be true? Myself, I find this result suspicious. I was under the impression that deeper roots are critical to tree survival. This result contradicts that, as Hanson SMP was lower than C+H at all VWC below 30cm.

Section 4.2: The lack of IAV in the model may be tied to the dependence on near-surface soil moisture. It appears that the main change imposed by using the Hanson model is that SMP is higher, so moisture is more readily available to roots, in the upper 30cm of the soil, and only when VWC is below 15%. I would expect that VWC in the upper 30cm gets reduced to very small amounts every year. In that case the model would not be expected to see much IAV, ever. So it may be that the lack of IAV in the model has nothing to do with mortality rates or pathogens, and everything to do with how the model extracts water from the soil. On the other hand, Figure S10 shows that SWP was lowest during the entire record in the period 2005-2007, and the GPP in those years was not as extremely depleted as it was in 2012 (Figure 2). This is something the authors should discuss.