Interactive comment on "Pairing FLUXNET Sites to Validate Model Representations of Land Use/Land Cover Change" *by* Liang Chen et al.

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This is such a useful study and I would hope that we could eventually expand the analysis to include more models. To make it even better I would like to suggest the following: I am unhappy with the emphasis on the uncorrected flux data (e.g. page 12, lines 264 to 267). Since we know the fluxes are generally (and variably) underestimated by the flux-observation system, I think it is more useful to consider the evaporative fraction ($IE/(IE+H)$) rather even than the 'corrected' fluxes which depends on yet more uncertain data (Rn and G). In my paper (Blyth et al, 2010, https://doi.org/10.1175/2009JHM1183.1) I scale the observed evaporation with the ratio of observed sum $IE+H$ and modelled sum $IE+H$.

You state in the introduction that the greatest uncertainties of change between forest and open come from the flux partition rather than the total absorbed radiation. So a focus on that would be helpful - hence the reliance on the evaporative fraction makes sense. Then separately consider Rn and G.

Secondly - I wonder if you can do the single-site simulations with the one-soil and two-soils options. Give the single-site off-line run a 50% fraction of 'tree' and 'open' and compare them - even include a bit of modelled soil moisture to show how it is affecting it. I found that getting the PFT and PFTCOL into the analysis of this paper tends to confuse the issues especially when one is so wayward, while the point about whether or not to have separate soils for each PFT seems essential!

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