

Interactive comment on “Partitioning the forest water balance within a boreal catchment using sapflux, eddy covariance and process-based model” by Nataliia Kozii et al.

Anonymous Referee #3

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Comments on "Partitioning the forest water balance within a boreal catchment using sapflux, eddy covariance and process-based model" Kozii et al. . .

Title – The word composition of the title is not clear “. . .forest water balance. . .” is it partitioning of water balance in boreal forest, or partitioning forest-water balance?
Abstract: – It would be nice to see water balance ways more specific to boreal forests to get a clearer picture how this work is worthy for readers – In line 20, it reads “water is lost”; this is very confusing wording all over the paper. 1) water cannot be lost from a system, 2) I assume this paper deals with water balance, so water “flows” from one state/regime to next, and that is not lost, 3) there could be some

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cases where ET can be referred as lost; that is when rainfall is dealt as “gain” – Line 30 change “water loss pathway” to “water balance component” – Line 32 Canopy interception is not part of ET, it should be rather evaporation from canopy – Line 33-34, the numbers do not add up 70, check Introduction: – The study has got no clear definition of hypothesis or purpose of the study – Line 51-52, I don’t agree that most studies treat ET as a single water flux pathway – Line 62-63, I think, rather there are dozens of experimental studies for decades – Line 73, what does it mean by “few investigation on water balance at catchment scale”? – The paragraph after line 90 better fits above the previous paragraph – Line 114, what is the state-of-the-art of hydrological measurements at the study site? Give some details of measurements done which of course respective to this study
Methods: – Line 147-148, not clear – Line 153-155, not clear – Line 157, what are the environmental data, give the details or examples – Paragraph line 165-175, Too much information. Please classify with instruments, data, how processed, calibrated, purpose – this might help readers to understand – Line 179, what does it mean by “non-stationarity” this word commonly used in statistical description not in instrumentation – Assumptions described in line 188-190 are wrong, re-write (it should be $IL = GP - TF - SF$)
Results and discussion – Are mixed up and not well structured: please take rendering sentences from results to discussion

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