

Interactive comment on “The influence of long-term changes in canopy structure on rainfall interception loss: a case study in Speulderbos, the Netherlands” by César Cisneros Vaca et al.

Anonymous Referee #2

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This manuscript reports on wet-canopy evaporation research conducted in a well-instrumented site that has also been the site of important work on the same topic in previous decades. In general the data and analyses appear to be of high quality. The manuscript is rich in detail, but in places it focuses on presenting details at the expense of a comprehensive logically coherent examination of the objectives.

The objectives themselves would benefit from some clarification. I think objective ii could be phrased better, in that the source of the latent heat flux is known but the real question is the source of available energy to drive that latent flux. Objectives iii and iv are too general to be useful. Aligning objectives with motivating statements

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would also improve clarity. For example, P2L31 suggests the objectives will include analysis of how canopy variation affects wet-canopy evaporation over time, and indeed there are some such comparisons in the discussion, but there are no explicit objectives pertaining to this goal, and only one very general conclusion about it.

One aspect of the work that I think warrants more robust treatment is the role of the canopy in supplying available energy for evaporation. There is little discussion of the sensitivity of various assumptions needed to support the estimations of this energy, yet it ends up being a relatively large proportion of the total budget.

There is quite a bit of duplicative text. For example, the insensitivity of interception models to in-storm vs. post-storm evaporation (i.e., Fig. 10) is mentioned at least four separate times in the introduction, results, and discussion. I think perhaps 3-5 tables and figures could be eliminated to reduce the overwhelming detail (some candidates: F2, F3, F9, combine F4 and F5; T3, T4 to text).

P6L13-14 both citations of tree properties should be to the primary sources rather than these secondary works.

P7 section 2.3 needs a name like “modeling,” or perhaps it should not exist and section 2.3.1 should be 2.2.8.

P7L25 does this mean data outside these two windows were completely omitted from all analyses? It doesn't seem so.

P8L3 and P9L6 the meaning of “was preferred” is not clear in either place; please state exactly what was done instead of what was desired. Does this mean that E_{bar} is not average as stated P9L4?

P11L3 this information duplicates the methods.

P11L5 how can SE be calculated from accuracy?

P11L29 it is not clear what the denominator is in this percentage

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P12L12 is this not the “water balance based’ evaporation rate” promised P9L7?

P13L30-31 redundant with figure caption

P16L30 the splash droplet hypothesis does not depend on high rainfall intensities. Its mention here is also unrelated to the rest of the paragraph.

Table 2 first column heading is mistakenly labeled “data-logger”

Table 7, Fig 10 the meaning of Run 1 and Run 2 must be specified here

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