

## ***Interactive comment on “Field data collection and analysis of canopy and litter interception in commercial forest plantations in the KwaZulu-Natal Midlands, South Africa” by H. H. Bulcock and G. P. W. Jewitt***

### **Anonymous Referee #1**

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In general terms the paper is well written and addresses an important aspect of hydrology, both from a process understanding perspective and from a modelling perspective. I have some specific comments to make that will (I think) improve the paper. There are also some areas where the paper needs to be corrected.

Section 2.2: How is a weather station 'Programmed to measure reference evaporation' - using what method? Section 2.3: Reference is made to rainfall events throughout the paper, but it is not clear whether these are continuous events over different time

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periods or whether these are really daily rainfall events. This can make a big difference in the interpretation of the results (see section 3.1) as daily rainfall totals could consist of short rain periods with plenty of time for evaporation. There is also an analysis of the % number of events falling into each category, but the paper does not say how much of the total rainfall is made up of events of different magnitude.

I would suggest that Figs 5 and 6 are presented in the wrong order. Fig 6 is required to be able to provide an initial estimate of the storage capacity, which is used in Fig. 5 and Table 3. This also means that the discussion of the results should be moved around in section 3.1 and this will avoid phrases like 'Canopy storage capacity will be discusse in more detail later'.

The sentence on page 11 L15-16 needs more explanation or needs to be presented in a clearer way.

P12, l6-8: this sentence is not clear and should be re-phrased.

Fig.2 Indicate what 'events' really means (see earlier comment). Fig.5 The regression lines do not seem to fit the data very well. What about using a different non-linear function. Fig. 9 I would have thought that stacked bars would represent the data in a much clearer way.

Corrections:

P2, L10: Refer to 'characteristics of rainfall'. P2, L11: Llorens et al. is 2007 in the text but 1997 in the reference list. P3, L12: should be Dye and Versfeld, 1992. P3, L13: Langford and O'Shaughnessy is not referenced. P6, L19 to 21: This sentence does not really make sense and should be re-phrased. P6, L28: I don't think you should refer to 'linear' variability of throughfall. The word linear could have different meanings. Perhaps 'radial' would be better. P7, L18-20: This sentence needs some attention as it is not correct grammar. P8, L19: Schaap and Bouten (not et al.) P8, L25: Helvey and Patric (1965) not referenced. P9, L1: should be fig. 4 P9, L8: '..sensitive to temperature

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which Gerrits (2010) attempted to correct by using a ... to compensate for the influence of temperature'. P P9, L27-28: add the 'illustrated by the arrows' in parenthesis to the end of the previous sentence and delete 'showing ...has been reached'. P10, L4-6: It is not necessary to repeat the values presented in a table within the text - this whole sentence can be removed. See also L8-10 on page 12; L6-8 on page 13 and L2-4 on page 14. P11, L26: add the short 1 sentence paragraph to the previous one. P12, L1: This is a repetition of the previous sentence. P14, L15: Helvey (1964) is not referenced. P14, L18-20: This is a trivial statement and should be changed or removed; it does not add to the discussion. P15 reference to Figs 14 to 16 and Fig 13 should be corrected. References: Dye and Versfeld / Everson et al. are out of order. Versfeld (1987) is an incomplete reference - refer to the correct conference name.

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