Hydrology and
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Discussions

Interactive comment on "Estimation of crop water requirements: extending the one-step approach to dual crop coefficients" *by* J. P. Lhomme et al.

Anonymous Referee #3

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The authors present a modification of the Penman-Monteith approach to estimate evaporation in plant canopies considering leaf surface resistance and soil surface resistance in parallel. In contrast to the two-step method (based on dual crop coefficients) that is described in the FAO-56 guideline, the calculation is performed as a one-step calculation, where an additional resistance for the air in the canopy is introduced. This additional resistance can be taken into account by a shift in the roughness length for the transport of heat and water vapour. The modification of the PM equation is convincingly derived and an estimation of the error that is caused by simplifications in the derivation of the modified equation is provided.

The subject of the article will be of great interest for many readers of HESS. Like the two other reviewers, I support the publication of the manuscript in its present form.

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Interactive Discussion

Discussion Paper

Since the manuscript is very carefully prepared, I have no further comments.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 4933, 2015.

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Interactive Discussion

Discussion Paper