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Hydrology and Earth System Sciences Discussions

# *Interactive comment on* "Evaluating models for predicting hydraulic characteristics of layered soils" *by* S. S. W. Mavimbela and L. D. van Rensburg

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Good day! Thanks for the notification that open discussion is now closed. I understand I missed the second referee's comments. Though I had a problem with the time taken by the referee to submit the comments I regard them to be useful and consistent with the first referee's comments. The issues of language, terminology, spelling such as that of Kasugi instead of Kosugi have already been addressed in the revised script. The area of major concern is the information (matric suction and K theta relationship) that constituted the objective function. HYDRUS does have this option. The difficulty



of using tensiometry on structured soil is well known. In this paper undisturbed soil columns were taken from insitu to determine SWCC under controlled conditions.The question was can HYDRUS-1D produce a better fit for in situ K-theta than the SWCC based models? That is why the (1,6) inverse solution was selected. In doing so the challenge that comes with different methods of calculating K-theta was minimized while at the same time the Models ability to provide a fitting curve for in situ conditions was tested.

Therefore, the concerns of the second referee about many mistakes in the procedure can be rectified if given the opportunity. Regards

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 301, 2012.