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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Using measured soil water contents to estimate evapotranspiration and root water uptake profiles – a comparative study" *by* M. Guderle and A. Hildebrandt

Anonymous Referee #1

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This paper evaluated four different complex water balance methods to estimate sink term patterns and evapotranspiration directly from soil moisture measurements. The work is valuable and interesting. I think the paper is likely worth publishing.

Comments: 1. The synthetic data of evapotranspiration and soil water uptake was used as reference in the manuscript (Sec 2.3). However, there is not enough statement on the reference data. For example, the accuracy of the synthetic values of evapotranspiration and soil water uptake, the frequency of the input data to get the reference data. I suggest that a more detailed introduction of the reference data should be added. Please make sure that the synthetic data is accuracy enough to be the reference.

2. The "evapotranspiration" in Figure 1, is the actual evapotranspiration or potential evapotranspiration?

3. Line 15, Sect 3.1: "The Inverse Model (im) predicted the daily evapotranspiration for a measurement frequency of 24 h with a very small relative bias of 0.89 %" It seems that 0.89% is for the frequency of 12h in Table 2?

4. Please make the captions for Table 2 and 4 more clear: the model performance for evapotranspiration or root water uptake?

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 10859, 2014.