

Interactive comment on “Investigating temporal field sampling strategies for site-specific calibration of three soil moisture – neutron intensity parameterisation methods” by J. Iwema et al.

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The authors have done a good job in collectively evaluating and discussing CRNS calibration results from three different sites. The results of the study provide some insight into the temporal soil moisture data required for calibration and a suitable model. I have a few comments and suggestions for improvement.

1. When discussing results in the abstract, results and conclusion sections, it would be helpful for readers to provide some indication of the approximate error in the pre-

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dicted weighted soil water contents (or range in weighted soil contents) from the specific model using CRNS neutron intensity counts. This will avoid ambiguous statements (e.g. “COSMIC performed relatively good at all three sites”; “sampling more than ten days would... improve the calibration results only a little”). Without these numerical values, it is impossible to evaluate and compare calibration strategies.

2. Methodology: Please identify the soil moisture sensors in each of the study sites. This is important with respect to interpretation of results (some sensors are inherently better than others are and less influenced by soil characteristics, even when calibrated).

3. The observation that “specifically resolving individual soil layers with COSMIC compared with depth-weighted soil moisture using the other methods led to better overall performance of the calibration” is important and should be included in the abstract if possible.

4. Do the authors believe that the differing density and/or spatial (vertical & horizontal) sampling of soil moisture measurements influenced the calibration performance? Should this be discussed?

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