

Interactive comment on “A soil moisture and temperature network for SMOS validation in Western Denmark” by S. Bircher et al.

N.E.C. Verhoest (Editor)

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Dear authors,

overall your paper has been well received by the reviewers. As indicated by the reviewers, although the paper is very descriptive, it is definitely of use for the hydrologic community. I definitely wish to thank the reviewers for their input.

However, the second reviewer makes an important statement with respect to "why the approach described in the paper would provide an enhanced in situ soil moisture observation". I believe that this should be very well addressed in the revised version of the paper. I follow his concern, and I was also a little puzzled about the approach.

Actually, I have some questions with respect to the design of the monitoring network. Some choices seem to be arbitrary (e.g. why was chosen for 3 clusters? and why was chosen for the locations of these three clusters? -it seems to be confined by some already existing experimental sites-). Furthermore, a GIS study was applied to identify the different land uses where monitoring points would be required, ensuring that the different land covers are well represented. But I wonder, is this the 'optimal' design methodology with respect to getting an average soil moisture estimate which corresponds to what SMOS 'sees', or is it 'optimal' for getting the best spatial average soil moisture?

I hope that the authors are able to address the different comments of the reviewers and that they may also provide more information on why this design procedure was selected for setting up a monitoring scheme for SMOS validation.

I am looking forward to receiving the revised version. Kind regards, N. Verhoest

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 9961, 2011.

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