

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

### **Anonymous Referee #3**

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#### Overview

This paper serves as a SMOS validation overview using a network dataset in Western Denmark. While this paper provides substantial background for the Skjern watershed, it also compares the network data to the SMOS soil moisture data products.

I agree with most of the comments of the other reviewers, though I think RMSE is a necessary metric for analysis. I recommend minor revisions to help clarify some points below. The big conclusion of the paper is that the network performs according to expectations and is well-suited for its purpose. However the SMOS soil moisture product needs further correction. This conclusion is supported by the text adequately and therefore I would recommend acceptance after minor revision.

C5248

#### General Comments

It is unclear to me if the network installations were in the actual crop and land cover types quoted in the tables, or were they installed in grass-patches near these land-cover types. Since these appear to be long term installations, I will assume they are in non-tilled/planted station locations which would mean it doesn't matter what the local land use is. Soil texture is significant and this portion is adequately covered. The land use is important for overview, but these stations are not 'in' those land cover types.

#### Specific Comments/ Technical Corrections (P: page, L: line or lines)

Table 1: I do not understand what this table is trying to say. The term working area needs to be clarified.

When a figure has multiple plots, please label (a), (b), (c) etc and refer to them as such in the caption.

The authors frequently reference composite classes by number. This seems unnecessarily complex for the reader and it would be better to refer to descriptive terms. Figure 4 especially. A table with descriptive terms would better serve the reader.

Figure 9, 2nd figure. Figure 10, 3rd figure. Both of these Pcorr figures seem to have some significant rainfall events which are not apparent in the soil moisture plots. and there are also significant soil moisture increases with no corresponding precip measurements. Please explain.

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