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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Estimating distributed soil texture using time series of thermal remote sensing – A case study in central Europe" *by* B. Müller et al.

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RC1.1) Our approach can be generally applied to any remote sensing time series that can be related to soil hydrological parameters. Yet,no data base for further analysis is compiled, but future research will try to evaluate differences to and similarities with other sensors. A mixed data base will also be evaluated.

RC1.2) The original pedological map is based on qualitative data and extremely vague in its description. The number of dominantly silty samples can be estimated from Figure 3. Actually, a certain amount of silt is existent in all of the soil samples. The observed high uncertainty is a consequence of small thermal differences between soils of widely different silt fractions. This issue was objected in Wang et al. (2015). We will add a

short paragraph which will address this issue.

RC1.3) Thank you for pointing to Verhoef's work (Murray and Verhoef, 2007). They are using excessive knowledge on soil hydrological parameters. Our approach is actually using none. For a thermal inertia time series, we would need spatially distributed information about soil hydraulic parameterizations which is currently non-existent. Thus, we cannot directly compare a calculated thermal inertia time series. We will add a paragraph to the discussion section, concerning this aspect.

RC1.4) 1) We will add reference to Müller et al. (2014) for further details on the comparability. 2) Sadly, it is not possible to unify the mentioned color legends. These are different as the contents of the maps differ. We intend to stay with the current coloring to exclude misconceptions. 3) We will extend the existing explanation. A complete quantitative explanation would go beyond the scope of this paper. 4) We will include a figure (Fig. R1). 5) We will exchange Fig. 8 with Fig. R2. 6) We will extend the specific paragraph. 7) We will change the text to "...95%- (red outline) and 75%-quantiles (blue outline) are shown."

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