Interactive comment on “A case study on the use of appropriate surrogates for antecedent moisture conditions (AMCs)” by G. A. Ali and A. G. Roy

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Both reviewers agree that this manuscript presents a very interesting soil moisture data set and that it addresses an important science question (appropriateness of surrogates for antecedent moisture conditions). However, it is clear from the reviews that in its current form, the manuscript does not satisfactorily explore the data set, some methodological choices are questionable (e.g. the type of fitted curves), it is not entirely clear how the data has been measured and that the obtained results should be further discussed.

Both reviewers give detailed indications of how the analysis could be improved. I invite the authors to carefully answer all the points before revising their manuscript accordingly. The analysis part will need some considerable improvement, both in terms of the chosen methods (see e.g. the suggestion of using rank correlation) and in terms of reference to existing work and process hypotheses (see reviewer 2). This will certainly result in some major revisions but I am confident that the additional work will result in a manuscript of high interest for the readers of HESS.

Final comment: please make sure that the revised manuscript contains all relevant details without referring to unpublished (submitted) material.

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