

Interactive comment on “The AACES field experiments: SMOS calibration and validation across the Murrumbidgee River catchment” by S. Peischl et al.

Anonymous Referee #1

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The paper presents the detailed method employed for the two-part AACES validation campaign for soil moisture measured by the recently launched SMOS satellite. The campaign was conducted in the Murrumbidgee catchment (some 80,000 km²) in Australia. The purpose of the paper is largely to explain in detail the methodology employed and give a brief evaluation of some of the results to indicate its quality, coverage and applicability. There is little by way of detailed analysis of the results but it is clear that this will be topic of future separate publications by the team and others. The paper thus lacks the originality that would be expected in a ‘normal’ scientific paper but this will come in later papers using this paper as the reference. A separate paper on the methodology is an efficient way to describe and refer to detailed methods in future

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publications. A link is provided to where all of the field and airborne data can be downloaded.

The authors have devised and undertaken a well thought out, detailed and logically challenging campaign that integrates across a range of scales from airborne data collection to ground measurement. The scale of validation measurement achieved here will not be achieved in other SMOS validation campaigns performed elsewhere. Thus, as a data set designed for the purpose of validating the SMOS data, it will be unique. The dataset may also have benefit beyond just the purpose it was designed for. The attention given to the design of this comprehensive campaign serves as a model for others to follow and in my opinion worthy of publication in its own right. The paper is applicable to a number of HESS journal subject areas.

The paper is very well written, logically structured, succinct and very easy to follow. There are very few typographical or grammatical errors. The title and abstract are also appropriate.

A description of the aircraft platform used for collecting the data would be useful.

Typographical correction: Line 140. "observations"

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 2763, 2012.