

Interactive comment on “Multi-source hydrological soil moisture state estimation using data fusion optimisation” by Lu Zhuo and Dawei Han

Anonymous Referee #1

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Referee Overview on the paper by Lu Zhuo and Dawei Han “Multi-source hydrological soil moisture state estimation using data fusion optimization” published for discussion in Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-478, 2016

General comments. The paper is devoted to investigation of ability to estimate land surface soil moisture with the help of the Local Linear Regression model using data retrieved from hydrological model SAC-SMA (soil moisture), radiometer MODIS (land surface temperature), and SMOS (brightness temperatures in H-V polarizations). The research topic is very relevant. The described approach is original and the results is quite convincing.

Specific comments. These comments concern with literature redaction of the paper. May be the Introduction is too long and its text is partly repeated in different sections

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of the paper. The text is quite loose and without prejudice to the content may be compressed in different parts of the paper especially in the beginnings of the sections.

Technical corrections 1. It is necessary to correct “polarisation” for “polarization” (for instance, line 13 and further). This mistake can be corrected using contextual replacement.

There are some faults in the References.

Line 602. Is winGammaTM the beginning of PhD Thesis title?

Line 642. smos mission has be replaced by SMOS mission

Lines 656-657. JOURNAL OF GEOPHYSICAL RESEARCH-ALL SERIES-, 99: 14,415-14,415. The letters must be in lower case. And what about pages?

Line 701. Number of pages is not specified

Lines 780-783 One paper is mentioned instead of two different ones.

780 Zhao, R.-J., 1992a. The Xinanjiang model applied in China. Journal of Hydrology, 135(1): 781 371-381. 782 Zhao, RenJun, 1992b. The Xinanjiang model applied in China. Journal of Hydrology, 135(1): 783 371-381

Resume The submitted paper is interesting; it corresponds to the subject of the journal. The paper may be published in the HESS after mentioned corrections.

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