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Hydrology and Earth System Sciences
Discussions

Interactive comment on "SMOS near real time soil moisture product: processor overview and first validation results" *by* Nemesio Rodríguez-Fernández et al.

Anonymous Referee #2

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This article details the performance of a neural network approach to soil moisture retrieval from SMOS brightness temperature measurements and ECMWF temperature estimates. Comparisons are made to the operational level 2 product and field measurements in northern America. A similar performance to the operational product is demonstrated, with a considerably lower lead time.

The training and validation data appear to have been drawn from the same time period - June 2010-2012. This prompts questions as to the applicability of the approach to data acquired at different times – if the system is only trained and validated for a certain temporal range, how does it perform on data outside that range? Five years

of observations have been acquired since then, validation using some of these would address whether changes on the Earth's surface such as vegetation growth have an impact on accuracy, and whether the neural network approach is reliable when given inputs outside its trained range.

Grammatical and spelling issues are detailed below. Figure 6(a) has either an outlier at the centre-right of the figure which needs to be explained, or a cursor which should be removed. Spelling - accesible should be accessible, "equipement" should be "equipment" Usage "arboreous" is not the right word; possibly "arboreal" was intended. p.8, l. 32 repetition of "water" p. 9, l. 18 "this results" should be "these results" p.12 l.7 "well defined" should be "well-defined" p.16 l.14 remove additional "the"

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