

Interactive comment on “Combining satellite observations to develop a daily global soil moisture product for a wide range of applications” by M. Enenkel et al.

Anonymous Referee #1

Received and published: 26 December 2015

The manuscript by Enenkel et al., (HESSD) adapted the ESA CCI soil moisture processing chain to produce global near real time soil moisture estimate (CCI NRT). Good agreement has been found when compared with CCI SM. It is an important and interesting paper, because high resolution satellite-based near real time soil moisture datasets are highly required by many applications such as drought monitoring. In general, the paper was well written, the results were well presented and discussed. I recommend its publication after addressing the following comments.

General Comments:

1. Since the aim of the paper is to develop a near real time soil moisture product, I

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suggest the authors improve the title by adding 'near real time global soil moisture . . .'.

2. To facilitate applications, I suggest the authors provide the link for the access to the new CCI NRT product.

3. Since SMOS also has Near Real Time Processing Chain, and relevant NRT product. It would be interesting to compare your product with SMOS NRT product in future study.

4. It is good to see the current study validated the satellite estimates with in-situ soil moisture measurements. However, the number of the sites (networks) are very limited. I understand it was due to the coverage problem. Nevertheless, I suggest the authors add a few sentences in the Discussion and conclusions section, to discuss this issue.

Specific comments:

1. P11552 L4-5: The CCI SM v02.2 has been released, please update here.

2. P11558, L7-8: The description needs to be improved: do you use a flag here for RFI and VOD? What are the thresholds?

3. P11564 L15-16: The SMAP active sensor can not provide data anymore, please update here.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 11549, 2015.

HESSD

12, C5835–C5836, 2015

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