

Interactive comment on “Regional scale evaluation of a MSG solar radiation product for evapotranspiration modeling” by J. Cristóbal and M. C. Anderson

Anonymous Referee #2

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General Comments

In this article the authors validate an MSG solar radiation product on the regional scale in Catalonia, Spain. They validate the satellite remote sensing product against stations from the local Meteorological network which are located in flat and hilly terrain. The results are then related to the difficulties of modeling evapotranspiration. The authors have not actually performed the modeling but give a thorough literature review on the sensitivity of solar irradiation and its errors on evapotranspiration.

The article is well written and clearly structured. With the evaluation of satellite remote

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sensing data the authors address a scientific important and pressing topic. I recommend this paper to be published with minor revisions as stated below.

Specific Comments

I agree with referee #1 on the issue of units of the fluxes: It is not clear to me why different units for hourly ($W m^{-2}$) and daily and monthly ($MJ m^{-2}$) aggregations are used and how they compare in this context.

Technical Comments

Concerning references:

You have confused the reference of Brisson, et al. In the text on page 8909 line 20 you cite Brisson et al., 1999, on page 8911 line 8 you cite Brisson et al., 1998, and in the reference list you have Brisson et al., 1994.

On page 8909 line 21 and page 8910 line 15 you cite LSA SAF, 2010 which does not appear in the reference list.

On page 8911 line 27 you cite Pons, 2004 which does not appear in the reference list.

On page 8919 line 1: the reference is spelled incorrectly – Rigollier et al (2004)

On page 8919 lines 16 and 20 you cite Geiger et al., 2008 which does not appear in the reference list (Geiger et al., 2008a and 2008b do).

On page 8922 line 13 you cite Anderson et al., 2012 which does not appear in the reference list.

Concerning typos:

On page 8916 line 27: ... they reported an hourly irradiation ...

On page 8918: Figure 3 and subtitle: from dawn to dusk

On page 8918 line 11: According to ...

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On page 8919 line 26: Figure 6 shows . . .

On page 8920 first two lines I would write: . . . the DSSF product reproduces well the seasonal variability measured at these two meteorological stations in both a flat and hilly landscape.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 8905, 2012.

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