

Interactive comment on “Mapping daily evapotranspiration and dryness index in the East African highlands using MODIS and SEVIRI data” by Z. Sun et al.

Anonymous Referee #3

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The paper on ‘Mapping daily evapotranspiration and dryness index in the East African highlands using MODIS and SEVIRI data’ represents a substantial contribution to scientific progress within the scope of Hydrology and Earth System Sciences. The integrated use of both MODIS and SEVIRI data to calculate daily actual ET seems to be unprecedented. However, there are some specific elaborations needed for the completeness of the publication as explained below.

Specific comments: You have assessed the accuracy of the new methodology against the flux tower measurements at one site in Sudan where the elevation is 610m asl

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and mean annual rainfall is 320mm. But I am not sure if that can give us better confidence on the model. This flux tower measurement cannot represent the East African Highlands where you have diverse land cover types and elevation ranges (most are between 500-4600m asl, Fig. 1). Hence I am afraid the title of the paper reflects the content regarding study area.

P6290 L9 and10, it is good if the authors review similar models that have been used to calculate ETMODIS and Q MODIS .Then of course it is possible to start explaining about the recently developed Sim-ReSET algorithm. This will give the reader a short background about work.

In general the scientific results are discussed in an appropriate and balanced way and conclusions are presented in a concise and well-structured way. Therefore I found the research paper very relevant.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 6285, 2010.

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