

# ***Interactive comment on “Realization of Daily Evapotranspiration in Arid Ecosystems Based on Remote Sensing Techniques” by Mohamed Elhag and Jarbou A. Bahrawi***

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General comments The topic of the article Realization of Daily Evapotranspiration in Arid Ecosystems Based on Remote Sensing Techniques is within the scope of Geoscientific Instrumentation, Methods and Data Systems Discussions. The title clearly reflects the contest of the paper. The aim of the research is to estimate the daily evapotranspiration rate and relative evaporation ratio using AATSR and MERIS sensors which will ease decision-making processes regarding sustainable water resources management. The paper describes the implementation of a new model and methodology in analyzing the received data. The introduction provides a generalized background of the topic, the variety of techniques used for evapotranspiration estimation

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and a comparison with the remote sensing models. The abstract summarizes the described work and gives accurate information about the article. The chapter Materials and methods describes each step of the work methodology in detail along with the conducted calculations. Obtained results are well interpreted and discussed in the light of assessing the estimated and actually measured values. The authors clearly describe their original contribution in developing the new model and especially its application in arid regions. The conclusions underline the benefits for decision makers when applying the model, particularly in areas under conservative irrigational water regulations. The article is well structured with all the necessary parts for such kind of a scientific work. The references are appropriate and most of them are published during the last years.

**Specific comments** The language of the article and some sentences need revision. For example the sentences: "Wadi Ad Dawasir and Wadi ar Rummah the most important pattern of the ancient riverbeds remains in the study area." "Daily evapotranspiration values ranging from zero to map indicates the range of the actual evapotranspiration in the study area ranges between zero and 6.61 mm/day." There are also technical errors, for example, when figure is cited in the text it should be written Fig. not Figure. The literature cited also needs corrections in accordance with the instructions. For example: Authors wrote: Roerink, G. J., Su, Z., and Menenti, M. (2000). A 337 simple remote sensing algorithm to estimate the surface energy balance. *Physics and Chemistry of the Earth*, 25: 147–157. The proper way is: Roerink, G. J., Su, Z., and Menenti, M.: A 337 simple remote sensing algorithm to estimate the surface energy balance, *Physics and Chemistry of the Earth*, 25, 147–157, 2000. **Technical corrections** When mentioned for the first time, the full name of the abbreviation should be given in brackets. For example MERIS, SEBS and AATSR full names should be given in the abstract in brackets.

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