

Interactive comment on “High resolution global grids of revised Priestley-Taylor and Hargreaves-Samani coefficients for assessing ASCE-standardized reference crop evapotranspiration and solar radiation” by Vassilis G. Aschonitis et al.

Anonymous Referee #1

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I appreciate the Editor to give me a chance to review an interesting and valuable paper. I found some merits in the both methodology and results. In my opinion, this paper has a good potential to be published in the journal. However, I have also some concerns on the different parts of the manuscript. If only the author(s) address carefully to all of my comments, I'll recommend publication of the manuscript in the journal: \checkmark What was the criterion to select the stations? Why the USA and Australia? Are they covering all climates? \checkmark Lns 7-8, cite also these three useful papers to enhance the literature:

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Selecting the best model to estimate potential evapotranspiration with respect to climate change and magnitudes of extreme events Temporal analysis of reference evapotranspiration to detect variation factors Analysis of potential evapotranspiration using limited weather data \checkmark Lns 15-16, cite also these two useful papers to enhance the literature: Application of new mass transfer formulae for computation of evapotranspiration Ability of Box-Jenkins Models to Estimate of Reference Potential Evapotranspiration (A Case Study: Mehrabad Synoptic Station, Tehran, Iran) \checkmark In the last paragraph of the Introduction, the authors should clearly mention the weakness point of former works (identification of the gaps) and describe the novelties of the current investigation to justify us the paper deserves to be published in this journal. \checkmark Compare the results with modified/calibrated H-S and P-T models presented by other researchers in all of the world (particularly in the USA and Australia). \checkmark The Discussion section should be broken to sub-sections for better understanding readers. \checkmark Explain the variations of the spatial extent of the major climatic groups CGs from Köppen-Geiger climate map. \checkmark Discuss the comparison of the average and standard deviation of RMSEs of the validation dataset between different pixel Resolutions more thoroughly. \checkmark What are the strategies/recommendations to reduce uncertainties in this study? \checkmark At the end of the manuscript, explain the implications and future works considering the outputs of current study. \checkmark The quality of the language needs to improve by a native English speaker for grammatically style and word use.

Please also note the supplement to this comment:
<http://www.earth-syst-sci-data-discuss.net/essd-2016-59/essd-2016-59-RC1-supplement.pdf>

Interactive comment on Earth Syst. Sci. Data Discuss., doi:10.5194/essd-2016-59, 2016.

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