

Interactive comment on “Modelling of water and energy exchanges over a sparse olive orchard in semi-arid areas” by Wafa Chebbi et al.

Anonymous Referee #2

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This manuscript presents an extensive field and modeling study to test the model scheme that better describes the energy fluxes over a sparse olive grove (7% vegetation cover). I find some critical issues with the measurements and the analysis, which I think the authors need to carefully consider before this paper can be published. They are commented on the PDF.

My main concern is that the authors have attempted to test the two versions of the model on daily and weekly scales, by modifying some of the parameters. These attempts seem to be arbitrary (for example, they changed the soil texture parameters although they have measured this quantity and they know what it is). Instead, they could have looked at finer temporal resolution (hourly or sub-hourly) to unravel the processes and the dynamics that contribute to the total daily fluxes. They also showed

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an agreement of $\sim 50 \text{ W m}^{-2}$ for the daily fluxes claiming these are satisfactory error magnitudes, while these magnitudes are considered satisfactory at hourly scale but not at daily scale.

Please also note the supplement to this comment:

<https://www.hydrol-earth-syst-sci-discuss.net/hess-2020-104/hess-2020-104-RC2-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2020-104>, 2020.

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