

Dear Dr. Su,

We greatly appreciate your providing fast, positive, and valuable comments on our manuscript. We have addressed your concerns in the revised manuscript.

Comment 1: Add a sentence discussing the role of G , as you have responded 'Concerning the issue of G , we do not compute it but utilize the sum of LE and H (as opposed to R_n minus G) from observations as the available energy, since our goal is to estimate the α parameter, so using either $LE+H$ or R_n-G will yield identical results.' in the same fashion.

Response: Thanks. We have added a sentence "Given the absence of observed heat storage (G) at some sites, we use the sum of latent heat flux and sensible heat flux (i.e., $LE+H$) instead of net radiation minus G (R_n-G) as the measure of available energy. Using either $LE+H$ or R_n-G yields identical results, as our objective is to use the available energy to invert parameter α from observations" in the Section of Data Introduction.

Comment 2: It would be useful to present your Fig. R2 in the discussion part.

Response: Thanks, done. In the discussion part, we have added a sentence "Meanwhile, some revised PT equations can also be used to estimate the parameter α (Yang and Roderick, 2019; De Bruin and Holtslag, 1982). However, these modifications often exhibit significant deviations (Figure A2). Specifically, the model developed by De Bruin and Holtslag (1982) is based on data from one specific site in the Netherlands, and the model built by Yang and Roderick (2019) comes from the fitness of global ocean surface data. These equations are primarily calibrated to match observed evaporation rates, while the underlying process is generally overlooked."

In the revised manuscript, we have embedded the appendix within the main text (due to only two figures and one table included), eliminating the supplementary file in the latest version.

Thanks again for overseeing the review process. Should you require further information or clarification, please feel free to contact me.

Yours sincerely,

Hanbo Yang (on behalf of the author team)
Tsinghua University
Email: yanghanbo@tsinghua.edu.cn