

Interactive comment on “Upscaling of evapotranspiration fluxes from instantaneous to daytime scales for thermal remote sensing applications” by C. Cammalleri et al.

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First of all we would like to thank the anonymous reviewer for these comments.

1 – We'll improve the references to previous studies by properly addressing the principal findings of other authors in the introduction.

2 – We agree that too little is said on the context of RS data in the first part of the paper. However, we would like to emphasize that even if the final goal of the tested methods is the upscaling of remotely sensed “instantaneous” estimates, the main goal of the specific paper is to highlight the capability of each scaling independently from

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the accuracy of RS estimates, as well as availability of required variables from RS. The limitations for each method (e.g., the difficulties in the modelling of available energy from RS) are then discussed successively in the results, as you correctly reported. We plan to better clarify this point in the new version of the paper, as well as enlarging the specific considerations on RS in the Discussion section. Regarding the analysis of temporal interpolation, we agree that this is a rather important topic. However, we believe that the two processes (1-upscaling from instantaneous to day and 2-temporal interpolations) have to be analyzed separately, since much can be said on both process. We are currently studying this second topic and these results, building on the daily upscaling results from the current study, will be presented in a follow-on paper.

3 – As shown in Fig. 1, general conclusions on the diurnal course of the upscaling errors cannot be easily obtained, as they depend on e.g., closure method. The central part of section 4 (see Fig. 3) aims at analyzing the effects of diurnal variation in the statistical context adopted in this paper. We plan to expand this section to better highlight the connections between diurnal variation of the upscaling factors and the results reported there.

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