

Interactive comment on “Can riparian vegetation shade mitigate the expected rise in stream temperatures during heat waves in a pre-alpine river?” by H. Trimmel et al.

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The authors thank the reviewer for the constructive and useful comments and for his valuable time spent reviewing this manuscript. All the comments will be addressed within a author comment.

However, we would like to directly comment on the reviewers remark concerning the positive sign of all energy fluxes in Figure 2B. In this figure the latent, sensible, short- and long wave energy flux averaged over the heat wave episode 4-8. August 2013 are shown. Extreme heat events as treated in this study are outlined by high minimum and maximum air temperatures. High minimum air temperatures limit radiative cooling at night, also higher air temperatures increase the sensible heat flux from the atmosphere

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towards the river. Under these extreme conditions long wave radiation and sensible heat flux became positive on average. Evaporation was the only energy flux, which was negative on average. The intention of Figure 2B was to better compare the magnitude of the negative latent heat flux with the magnitude of the short wave radiation balance, the magnitude of the other energy fluxes and the view to sky. This is why the latent energy flux was multiplied with (-1) and a minus sign added in the legend. In the text the term “input” and “output” was used to indicate the positive or negative direction of the energy flux. The authors however understand that this representation of the energy fluxes is misleading and will clarify this aspect.

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