

Interactive comment on “A distributed stream temperature model using high resolution temperature observations” by M. C. Westhoff et al.

M. C. Westhoff et al.

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We would like to thank the referee for his/her comment on our paper. We consider the comment as very useful. Below we provide the answers to the comments and questions raised.

The referee suggests that more of the richness of the observed dataset should be shown. It is indeed a good comment to add a few longitudinal profiles of the observed and modeled temperature. This will be included in the final version of the paper.

The missing sensitivity analysis was mentioned by referee #2 as well. It will be included in the final version.

The question of what else can be learned from such a rich dataset will generally be answered in following research in which diffuse sources and losses will be investigated.

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This will be discussed in the final version.

Specific comments: P128L11: The discharge was 1.2 l/s with a standard deviation of 0.14 l/s. The total precipitation over the period considered amounted to 2 mm. The maximum intensity was 0.8mm in 10 minutes.

P129L4: The grid spacing was 2m.

P131L8: The accuracy of the LandSaf satellite is difficult to verify because of a lack of reliable data. However, all values are within the theoretical maximum solar radiation. The resolution is 3km times 3km at nadir. We recognize that this is a low resolution, but because the temperature survey was a try-out we did not exactly know what we could expect from the measurements and which other parameters would be useful to measure. Only after we saw the wonderful dataset obtained solar radiation appeared useful for this study. This is the reason why we did not measure this parameter in the field. We presently installed a mini-meteo station in the catchment.

P131L18: The determination of the Cs factor will be explained in more detail.

P137: We consider this a very useful comment and we will take it into account in the final paper.

P137L18: The values will be included here again.

P138: See above

P138L22 and table 2: The additional information will be added in the final version.

Figure 2: This figure will be replaced by a better one

The minor comments are considered as useful and they will be taken into account in the final version of the paper.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 4, 125, 2007.

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