

Interactive comment on “Proof of concept: temperature sensing waders for environmental sciences” by R. Hut et al.

R. Hut et al.

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General

We would like to thank the referees for the positive and constructive comments that have contributed to the improvement of the manuscript. Our response to the comments are listed in *italic*. A revised version of the manuscript is attached as a supplement.

Reviewer 1: P. Marchetto

Nothing seems to need to be changed.

Reviewer 2: S. Grimaldi

The manuscript is interesting, well written, and easy to read. The topic is in line with

the Journal aim and with the recent awareness of the scientific community on how is pivotal research on new observation techniques (i.e. MOXXI-IAHS working group: <http://iahs.info/Commissions-W-Groups/WorkingGroups/MOXXI.do>). So, I am glad to suggest to publish the manuscript. I have just few comments listed below.

1. The reader could think that the proposed apparatus cannot be widely used since he could not be aware on how many fisherman usually fish inside the small rivers. So, maybe a short comment on the potential diffusion of the approach could be useful.

Thank you for this suggestion. We have added a short comment on the estimated extend of the fishermen in small river reaches.

“Recreational fishing is enjoyed by many people globally. Already in the U.S. only, there are an estimated 27 million freshwater (Great Lakes excluded) anglers.”

2. page 433 line 23 "The calibration results are shown in Fig. 3. Figure 3 contains all the data, from the measurements with, and without, body heat." this repetition (Fig. 3. Figure 3) can be avoided.

We have changed these sentences to: “Figure 3 presents results of all calibration experiments, i.e. the measurements with and without body heat in the wader.”

3. page 434 line 10: "Figure 4 shows the results of the experiment in the flume. Measured data is in black, curves fitted to the measurement are in red. The fitted time constant τ is shown in each graph, both for the heating in the 40 L bucket as for the cooling in the flume." few more details on the experiment procedure could be provided, since it is not clear if you deploy hot water in the flume or you put the wader before in the bucket and then in the flume.

Although the experiment details are given in section 2.2., we acknowledge these sentences are confusing. We have changed the text to:

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“Figure 4 shows the results of the flume experiment. Measured data is presented in black, and the curves fitted to the measurements are shown in red. The fitted time constant τ is shown in each graph, both for the heating of the wader in the bucket, and for the cooling of the wader after placement in the flume.”

Furthermore, we have clarified Figure 4 by:

- Including “Wader without leg” and “Wader with leg” as titles in the figures.
- Including a dashed line to indicate when the wader was put from the bucket into the flume.

Please also note the supplement to this comment:

<http://www.geosci-instrum-method-data-syst-discuss.net/5/C172/2016/gid-5-C172-2016-supplement.pdf>

Interactive comment on *Geosci. Instrum. Method. Data Syst. Discuss.*, 5, 427, 2015.

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