

Interactive comment on “Technical Note: Monitoring of unsteady open channel flows using continuous slope-area method” by Kyutae Lee et al.

Anonymous Referee #1

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This review is very concise as my previous attempt to write a review was killed by the unfriendly editorial system.

The paper in itself is OK, but lacks clearness and remains too speculative. Vague words like “believe”, “supposed” and “seem” indicate this.

The governing equation should be added to facilitate interpretation.

Measurement accuracy should be provided together with its consequences for the final results. The same holds for the reference of the USGS and Fread’s methods. As the true discharge is not known, comparisons can only be valid if the measurement errors are taken into account.

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Given the aspect ratio of the channel, not only bed roughness but also bank roughness/irregularities should be accounted for and thus addressed. Given the accessibility of the river reach characterisations of bed and bank roughness should not be a problem. Why is this information not used here? Are inferred roughness values realistic? With some information on the sediment composition, estimates regarding dynamic bed roughness can easily be made e.g. vanRijn, JHE 1984. Was there any vegetation in the domain under study? How much effect would it have? What is the rationale behind averaging the measured “unsteady slopes” knowing that the flow is subject to non-linear friction?

In its present form it merely describes the measurements done, but does not sufficiently contribute to a better understanding of the advantages of the method, and might thus not be very interesting for the readership.

It is not very convincing that the presented method is promising on the basis of the presented material.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-289, 2016.

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