Geoscientific Instrumentation Methods and Data Systems Discussions

Geosci. Instrum. Method. Data Syst. Discuss., author comment AC3
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Reply on RC1

Hubert T. Samboko et al.

Author comment on "Evaluating low-cost topographic surveys for computations of conveyance" by Hubert T. Samboko et al., Geosci. Instrum. Method. Data Syst. Discuss., https://doi.org/10.5194/gi-2021-22-AC3, 2021

We acknowledge and appreciate the comments provided by RC1. We find that the comments were accurate in pointing out weaknesses of the manuscript especially with respect to missing descriptions and literature review of key methodologies/outputs. We therefore kindly submit the following responses to each comment made in order to improve the document.

No	Comments from Reviewers	Authors Response	Authors Changes
1	Title: The title provided is too generic. I suggest to change it focusing on the UAS technologies for surveying.	We note and agree with the comment. The study indeed relies on the results of the UAV products and RTK GNSS (i.e. low cost technologies)	We suggest changing the title to 'EVALUATING LOW COST TOPOGRAPHIC SURVEYS FOR HYDRAULIC RATING'
2	Abstract. The abstract is too long. It should be a very brief summary of your paper.	We note the lengthiness of the abstract. We identify that we include a long methodology explanation which may not be necessary for an abstract.	Abstract will be shortened. This will be achieved by excluding the elaborate methodology explanation

3.1	The introduction is too generic and doesn't focus on the main questions of the paper. Some references are missed or included only in the following sections.	We identify the shortcomings of the Introduction. Mainly through the specific exclusion of :	We propose to significantly alter the introduction to add all the important missing information.
		1. Information on the RTK GNSS equipment (Accuracy, cost, method)	We will alter the introduction such that the novel attributes of the manuscript as well as the objectives are fully described.
		2. The gridding or merging approach of the bathymetry	
		3. The doming effect and lens distortion (brown Conrady, Fixed camera parameter FCP etc.)	
		4. The influence/importance of the slope	
3.2	Some main research questions (e.g. the impact of lens distortion on geometry accuracy) are introduced only in the final sections.	This is a critical missing component.	We will add the missing information earlier on in the manuscript. **E.g**. the impact of lens distortion accuracy the observation of slope and the merging of dry and wet river profile
3.3			