Text in black is the comments from referees

Text in blue is the author's response

Answer to Dr. Rebecca Hodge

Sorry for the lateness of this comment. The two reviewers have provided several useful points for you to think about, and I encourage you to address them fully. I wanted to add a further comment for you to consider when revising your paper. The discussion currently focusses on the question of whether the identified discharge is a formative discharge. However, it would be beneficial for it also to address some wider issues, which will help those that might be interested in applying these methods elsewhere. For example, are there any errors or uncertainties associated with the methods that it is important to consider? What sort of datasets are required? Secondly, could these methods be applied elsewhere? Under what conditions would this method work or notwork?

In order to address this we have added the following paragraph in the conclusion.

"One of the main source of uncertainty in discharge estimate is due to the error in the measurement of thread's width. This depends on the image resolution and the accuracy of the algorithm used to classify the river pixels from remote sensing images. A better resolution remote sensing images would most likely minimise the uncertainty and improve the agreement between estimated and in-situ discharge. Further our regime equation established for Himalayan rivers is based on a simple physical mechanism that explains the geometry of alluvial channels. We therefore suspect that the procedure we have established could be extended to most alluvial rivers. Globally it has been observed that the threshold theory well predicts the exponent of the regime equation (Eq. 4, in the manuscript), however the prefactor may vary significantly depending on the grain size distribution, turbulent friction coefficient and the critical shield parameter (Métivier et al., 2017). It is therefore suggested to modify this regime curve from the measurement of width, discharge and grain size of a individual thread's of braided and meandering channels in the field before applying it to the rivers of different climatic regime. Further it should be noted that our regime curve relates to the measurement of hydraulic geometry of individual threads of braided and meandering rivers, therefore it is applicable only at the thread scale. Since the resulting regime curve is non linear, estimating discharge across a transect in a braided river from the aggregated width will be different from the one obtained after the summation of discharges of the individual threads."

References

Métivier, F., Lajeunesse, E., and Devauchelle, O. (2017). Laboratory rivers: Lacey's law, threshold theory, and channel stability.