

Interactive comment on “An overview of underwater sound generated by inter-particle collisions and its application to the measurements of coarse sediment bedload transport” by P. D. Thorne

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This manuscript was prepared for submission after the author took part in the recent International workshop of acoustic and seismic monitoring of bedload and mass movements (http://www.wsl.ch/dienstleistungen/veranstaltungen/veranstaltungskalender/bedload_massr)

Recognizing that earth surface researchers have been particularly interested in the use of surrogate bedload monitoring techniques in the past few years, that hydrophones are

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one of the very few sensing methods appropriate for large gravel bed rivers, but that few if any of the researchers have the appropriate background in acoustics to usefully utilize the technology, this paper expounds the relevant issues, exemplifies them, admittedly to a considerable extent based on previous research by the author, but does so also with respect to novel experimentation.

It is a fact that this field of the geosciences is as yet backward relative to others, such as the use of geophones for bedload monitoring. Sadly all other bedload monitoring techniques for large and fast flowing rivers, especially in floods, are incapable of providing an acceptable, widespread methodology. It is expected that the basic physics clarifications made by the author will serve to attract researchers to this exciting methodology.

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