

The manuscript by Salim et al. describes a series of experiments of open channel flow over flat surface of sediments to study the definition of the threshold velocity necessary for suspension of sediments. The authors chose two mean flow velocities, one above and another below the critical velocity and examined sediment flux correlation with momentum flux as well as turbulent ejection and sweep events. I found the manuscript well written and appropriate for publication after revision. However, several issues, most minor, must be addressed regarding this manuscript before this effort becomes an acceptable publication in my point of view.

1. Some information regarding the open channel flow is missing that would be very beneficial for fluid mechanics when they require to compare the features of the flow: Reynolds number based on the wall shear velocity, particle Reynolds number based on the wall shear velocity. Other than the bulk Reynolds number, another relevant non-dimensional number is the particle Reynolds number with an appropriate velocity scale that here should be the shear velocity. Can authors compute/estimate the shear velocity using momentum balance?
2. The last sentence of Introduction needs more elaboration. It is a jump to a literature without explaining it: The critical bed shear stress can also be excluded when computing the bedload grain velocity (Cheng and Emadzadeh, 2014).
3. A few literatures are missing in the paper:
 - a. Robinson, S.K., 1991. Coherent motions in the turbulent boundary layer. *Annual Review of Fluid Mechanics*, 23(1), pp.601-639.
 - b. Bagnold, R.A., 1956. The flow of cohesionless grains in fluids. *Philosophical Transactions of the Royal Society of London A: Mathematical, Physical and Engineering Sciences*, 249(964), pp.235-297.
 - c. van Rijn, L.C., 2013. Simple general formulae for sand transport in rivers, estuaries and coastal waters. Retrieved from www.leovanrijn-sediment.com.
4. Since the experiments are occurred over flat surface, I do suggest to mention this explicitly in the title or Abstract; “unidirectional currents over flat bed”
5. Discussion of Figure 3 is vague! How do authors conclude that “Sufficient shear stress was produced to generate sediment resuspension”?
6. What do authors suggest in order to improve the current representation of the threshold? They should mention a variable that may correlate better to these phenomena than shear stress.
7. Line 26, page 7, change “energy” to “energetic”.