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Title

Gravity currents over fixed beds of monodisperse spheres

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Report on
Gravity currents over a fixed bed of monodisperse spherical particles
by *T. Köllner, A. Meredith, R. Nokes and E. Meiburg*

The revised manuscript by Köllner *et al.* has substantially addressed most of my comments in the previous review, and I am therefore now happy to recommend that it be published in its current form. In particular, I find that the description of the results is substantially more succinct and readable. I have only a very few stylistic points I'd suggest in the manuscript detailed below

- Page 3, end of 1st partial paragraph: I'd use "one another" rather than "each other", but this is perhaps personal preference.
- Section 1, last paragraph: It would be preferable to keep the same tense throughout. For example, "we will be able to obtain" should be "we are able to obtain".
- Page 3: I'd refer to it simply as "salt" not "table salt" as it's use in cooking seems not entirely relevant.
- Page 4: Just after equation (2.2) you're missing the units on the kinematic viscosity.
- Page 5: you need a space to start the sentence beginning "A width of 10mm" at the top of the page.
- Page 10: Can you be explicit about the use of the subscript in the average here since (a) such a subscript is often used to indicate derivatives (which I understand is not the case here, but it would be helpful to be explicit) and (b) you use this style of notation later in the paper.
- Page 22: After equation (4.2) I'd appreciate if you defined what you mean by western and southern in terms of your coordinates, even if as a parenthetical remark.
- Figure 17: It's unclear to me what the origin of the oscillations in the simulations are, particularly since these have a fixed top so it's not the seich. Nevertheless, I appreciate the point being made in these figures.
- Page 28: I found the discussion here very helpful, and only wonder (as effectively have the authors) if the effective permeability of the medium might be characterised. I agree that for such large beads there must be inertial corrections to the Darcy model presented here, which the data might be used to illuminate. But I also suspect a rigorous analysis is outside the scope of an already lengthy manuscript.