Natural Hazards and Earth System Sciences Discussions

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC4
https://doi.org/10.5194/nhess-2021-323-RC4, 2021

Reply on CC1

Anonymous Referee #2

Referee comment on "Slow build-up of turbidity currents triggered by a moderate earthquake in the Sea of Marmara" by Pierre Henry et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2021-323-RC4, 2021

Many thanks, and for putting together a very interesting and potentially valuable contribution too.

The main thing may be just to explain what each instrument measures, as in the review comments.

My understanding from the leaflet is that this sensors also uses Doppler shift to measure flow speeds, but at a single point, for two orthogonal directions that are compass and tilt compensated. It would be good to know how close that single point is to the sensor (for example, in the case of an ADCP there is a blanking distance immediately in front of the sensor).

Then, the main thing is to clarify why you can trust one of the two ata point acoustic measurements but not the other one, when the benthic lander is lying on its side. Could both acoustic Doppler (at a point) current meter measurements be compromised when the lander is on its side. That issue then related to whether you can trust the acoustic current meter data during the 10 hours, and if there is a delay between lander falling over and when the turbidity current arrives (or not).

So, just some clearer details in the section on what each sensor does - in the revised version - would help a general reader.

Thanks...and for producing a very interesting study.