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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Assessing different imaging velocimetry techniques to measure shallow runoff velocities during rain events using an urban drainage physical model" *by* Juan Naves et al.

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Naves at all present a lab comparison of different particle imaging velocimetry techniques under (indoor) rainy conditions. I believe that analyzing this is a valuable addition to the scientific literature. I especially am happy that the authors have shown that not all PIV techniques perform equally under different rainy conditions, something very relevant when analyzing (urban) flood impact from video images.

I commend the authors on their thorough effort of making the data on which they build

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Discussion paper

their conclusions available to the public in true Open Science spirit.

I have a few minor issues with the paper in its current form, but am overall of the opinion that this paper should be published in HESS.

(standard) disclaimers for reviewing:

- my main line of research is not in urban flooding, but in larger scale hydrology and in designing observational techniques. I have reviewed the paper through this lens.
- I'm not an English native speaker, nor do I believe it is the job of scientists not trained as copywriters or editors to review each others placement of comma's and style forms used, I have therefore looked at the science presented, not at any language issues.

Minor issues:

- The paper focusses on the application of urban flooding of streets and this is reflected in the literature cited. In river hydrology there are quite some papers also looking into using seeding for better LSPIV results. Multiple papers by Flavia Tauro and her team come to mind. Perhaps (but I'm not sure) adding these in the introduction would better frame the current research.
- While the authors do make all their data available, and they do state which software packages they use for part of their analyses, it is impossible for me to check their results, since the code they use to generate their results is not shared. I would like to ask the authors to upload the code that generates the figures presented in the paper to Zenodo and cite it in the manuscript. This would also facilitate reproducing the result of this study, or expand on it.

- The authors make use of the “jet” colormap for their figures, a choice that is known to results in figures that highlight differences not present in the data. (See among others https://www.jstor.org/stable/24862699?seq=1) Please switch to a different colormap. (this is a pet peeve of mine)

Concluding: I really like the paper, the science, as presented, is sound although the actual claims cannot be verified without the software that generated their results shared alongside the paper.

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