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Interactive comment on "Hypsometric amplification and routing moderation of Greenland ice sheet meltwater release" *by* Dirk van As et al.

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This paper presents a very interesting update of the van As et al. (2014) paper discussing river discharge over GrIS and successfully explains here its temporal variability with the help of modelling. This paper is well written, discusses a lot of interesting stuff (routing delays, melt retention, rapid lake drainage, rainfall events, . . .), deserves to be accepted in TC as a robust following of the van As et al. (2014) paper and can be published with only some minor revisions for me.

- the paper should more highlight that the considered catchment (in a very dry area) is likely not representative of other GrIS areas (for meltwater retention, lake drainage, . . .).

- An interesting sensitivity experiment to evaluate the retention in firm (Section 4.6)

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should be to increase the winter snowfall by a factor 2. While the agreement is very good with obs, higher winter accumulation and higher melt could give similar results. Therefore, it is for me a bit too early to claim that there is not meltwater retention in this catchment. This should be confirmed by sensitivity experiments (e.g. Snowfall x 2 + Melt x 1.5).

- Daily MAR outputs could be used in addition to check that melting routing delay used here are not too model dependant because it is very likely that the melting routing delays used here (Fig9) could compensate biases in the model. MAR has also its own but different biases. Evaluating how the routing delays is model dependant will add robustness in the paper. I can provide 7.5km daily outputs to the authors if they find that it is an interesting addition to their paper.

- What does "ca." means ? It is used several times in the paper.

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