

Interactive comment on “Assimilation of passive microwave AMSR-2 satellite observations in a snowpack evolution model over North-Eastern Canada” by Fanny Larue et al.

Fanny Larue et al.

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Dear Editor-in-chief,

Please find attached to this letter the revisions to this manuscript. We would like to thank the reviewers for their detailed comments which were useful in producing an improved manuscript. We carefully responded to all the questions and comments. As requested by the reviewers, the manuscript was checked by a native English professional reviewer to correct language issues and grammar mistakes. We put in advance a tiny mistake in the assimilation algorithm. This was not significant, we, nevertheless, recalculate all the simulations. As expected, the difference compared to previous re-

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sults are not important, but we present all the new results in this revised version, as this is more rigorous. It doesn't change the conclusion of the paper. Note that since the first submission of this paper, our paper previously submitted and explaining in details the assimilation scheme used in this paper is now published in Water Resources Research (Larue, F., Royer, A., De Se^lÁve, D., Roy, A., Picard, G., Vionnet, V., & Cosme, E.: Simulation and assimilation of passive microwave data using a snowpack model coupled to a calibrated radiative transfer model over northeastern Canada. Water Resources Research, 54, 4823-4848, <https://doi.org/10.1029/2017WR022132>, 2018). Moreover, a strong effort has been made to facilitate a deeper understanding of this paper (flow chart modified, methodology better described. . .). A new table was added to describe all acronyms and experiments. We think that this new version is significantly improved compared the previous submission.

Please, do not hesitate to contact me if you have any further questions or comments, or if anything is missing from the submission of the revised manuscript.

Regards,

Fanny LARUE

Please also note the supplement to this comment:

<https://www.hydrol-earth-syst-sci-discuss.net/hess-2018-95/hess-2018-95-AC3-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2018-95>, 2018.

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