

Hydrol. Earth Syst. Sci. Discuss., author comment AC2
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Reply on CC1

Eunsang Cho et al.

Author comment on "Precipitation biases and snow physics limitations drive the uncertainties in macroscale modeled snow water equivalent" by Eunsang Cho et al., Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2022-136-AC2>, 2022

Thank you, Ross Brown, for letting us know about your great work which addressed the issues with solid precipitation-driven errors in SWE simulations in southern Québec. We included additional discussions in the Discussion part.

"Brown et al. (2018) also demonstrated insufficient solid precipitation from gridded reanalysis and model products led to systematic errors in SWE estimations in southern Québec, indicating the need for improving estimates of snowfall. These results correspond to the widespread underestimates of precipitation up to more than 1500 mm for all meteorological forcings from this study, particularly for the mountainous areas with complex terrains."

- Brown, R., Tapsoba, D., & Derksen, C. (2018). Evaluation of snow water equivalent datasets over the Saint-Maurice river basin region of southern Québec. *Hydrological Processes*, 32(17), 2748-2764.