

Interactive comment on “Numerical modeling of the dynamics of Mer de Glace glacier, French Alps: comparison with past observations and forecasting of near future evolution” by Vincent Peyaud et al.

Anonymous Referee #2

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This is a nice paper that hindcasts and forecasts the evolution of the lower reaches of Mer de Glace using Elmer/Ice, a degree-day mass-balance model, a variety of data constraints and the full suite of EURO-CORDEX climate projections. The authors demonstrate useful ways of coping with limited data (e.g. imposing flux boundary conditions at the limit of bed mapping) and excellent integration of observations through the hindcasting.

The significance of this study stems in part from the iconic status of the Mer de Glace, its historical significance and its prominent modern role as a tourist destination. With lit-

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tle extra effort, the authors could interpret the significance of their results in this context and add some interest and value to the paper that a broad readership would appreciate.

Though not a show-stopper for publication, it would be nice to see at least some comment on the sensitivity of the results to (1) the large precipitation correction factor and (2) the treatment of ice flux from the Leschaux gate.

I have made numerous comments (the review effectively) in the attached pdf that I hope will assist the authors with revisions, including editorial suggestion intended to improve the readability of the text.

Please also note the supplement to this comment:

<https://www.the-cryosphere-discuss.net/tc-2020-75/tc-2020-75-RC2-supplement.pdf>

Interactive comment on The Cryosphere Discuss., <https://doi.org/10.5194/tc-2020-75>, 2020.

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