

The Cryosphere Discuss., editor comment EC1
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Comment on tc-2021-230

Nicolas Jourdain (Editor)

Editor comment on "Basal melt of the southern Filchner Ice Shelf, Antarctica" by Ole Zeising et al., The Cryosphere Discuss., <https://doi.org/10.5194/tc-2021-230-EC1>, 2021

Dear Ole Zeising and co-authors,

First of all, I thank the two referees for their suggestions. Both referees consider that this paper would be a useful contribution to The Cryosphere but that some aspects should be addressed before publication.

In particular, both referees ask about the possibility to estimate the uncertainty on the pRES melt rates. Section 3.2 should be improved (clearly express what trend or lack thereof is visible in Fig. 4). Both referees also regret the lack of discussion on oceanographic processes, which could be addressed by further discussing all the variables that may impact local melt rates (not only ice temperature, but also its roughness, as well as ocean velocities that may not only depend on the local ice-draft slope, in particular due to the strong influence of tides in this sector). Please also discuss the presence or absence of seasonal cycle and its potential impact on the estimates of annual melt rates. In general, please provide detailed responses to individual comments by the two referees.

Best regards

Nicolas Jourdain