

Dear Editor,

Thank you for accepting the article with these minor modifications. In response to the reviewer comments, we have changed:

- 1) The reviewer is correct, and eq. (18) indeed contained typographic errors. These have been corrected in the updated manuscript, and we apologise to the reviewer for initially dismissing their comment regarding this equation being incorrect (the factor π is still not related to axisymmetry, but the second part of the reviewer's first comment should have warranted more carefully checking on our part). We have changed this equation to now have a factor 2 in front (please note the minus sign included in the $-2k$ term gets cancelled by the sign of the $-2/\sqrt{\pi}$ term), and use the exponent $\frac{1}{2}$ for the time. We have also expanded upon the derivation in the paper to make it easier to follow. Please note that this factor 2 cancels out in Eq. 20, due to Eq. 10 also containing a factor 2, which was correctly incorporated in the original manuscript. Furthermore, all simulation results that are reported in the original manuscript have used the corrected formulation, see the publicly available github page for this code to indicate that the results have always been obtained using a factor 2, and an exponent of $\frac{1}{2}$ (e.g., see line 434 for this thermal flux in the file https://github.com/T-Hageman/MATLAB_IceHydroFrac/blob/main/Models/%40FractureFluid/FractureFluid.m)
- 2) We thank the reviewer for this suggestion, and will take it into consideration for future work. To clarify that we indeed use a single flow model, but that it theoretically would be possible to switch between laminar and turbulent models, we have added a couple of sentences to section 2.2.1: "We note that, while this fluid flux is indeed turbulent in the majority of the crevasse, it is unlikely to be close to the crack tips. For simplicity, we use this turbulent relation throughout the crevasse, however, slightly more realistic results could potentially be obtained by dynamically switching between laminar and turbulent flow models based on the current fluid flux."

We hope that these additions have satisfied the Editor and Reviewers,

Kind regards,