

Dear Ludovic Räss,

Thanks for the possibility to improve the readability.

We did the following for clarification

- We removed the technical terms 'relaxation' and 'functional' and replaced them with 'step size control' and 'function', respectively.
- We added a short discussion about the boundary condition $\mathbf{v} \cdot \mathbf{n} = 0$ in Sect. 2 to make it clearer that the theory also covers the experiments in Sect. 6.
- We added that the minimum step length for the exact step sizes is 0. Additionally, we made a small mistake in setting up the time-dependent experiment of ISMIP-HOM E1 for the Picard iteration with exact step sizes: We had in Algorithm 4 for the minimum step size $a = 0.5$. We recomputed this experiment setting. As all step sizes for the old run were larger than 1, the results did not change. We only updated the computation times, which were for the complete iteration within the standard deviation. We uploaded the new version to Zenodo and changed the title accordingly.
- The description of the functional J in Eq. (7) was imprecise/wrong. We did add the dependency on the pressure p . Thus, we corrected the use of J in Algorithm 3 and Eq. (8). We also added Eq. (9) to explain the exact step sizes.
- We rewrote the discussion of Fig. 20 and Table 2 by discussing both together. Then, we discuss each algorithm only once and not twice within a paragraph. We repeated this procedure with Fig. 22 and Table 4.
- We put the information about the maximum number of iterations in the caption of Fig. 20 and Fig. 22 to make this information easily accessible to readers.
- We discuss both Newton variants after each other and both Picard variants after each other in each experiment. Then, the structure is clearer and we need long technical terms like 'Newton's method with Armijo step sizes with a minimum step size of 0.5' less frequently.
- We replaced the terms 'classical Picard iteration' and 'Picard iteration' with 'Picard iteration without a step size control' to distinct better from the exact step sizes and remove the unprecise formulation 'classical Picard iteration'.
- We asked the copy-editing service from Copernicus Publications. However, they explained that copy-editing would be automatically done after acceptance of the manuscript.