

Request for pre-publication correction of *Subglacial hydrology regulates oscillations in marine ice streams*

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October 27, 2025

Two parameters in table 1 are incorrectly reported from those used in the numerical simulations (left: value stated in paper, right: value used in the numerical solutions):

$$\begin{aligned} A = 1.6 \times 10^{-24} \text{ Pa}^{-3} \text{ s}^{-1} & \Rightarrow A = 1.6 \times 10^{-25} \text{ Pa}^{-3} \text{ s}^{-1} \\ a = 0.3 \text{ m yr}^{-1} & \Rightarrow a = 0.5 \text{ m yr}^{-1}. \end{aligned}$$

I would appreciate correction of these values before publication to be fully consistent with the model results reported in the paper.

As these parameters were also used to estimate the approximate values in the appendix, the values estimated in Eq. (B1b-e), Eq. (B3a-f), Eq. (B7c-d), Eq. (B9a-d) should be changed to be fully consistent with the numerical model results, see below, and line 72-73 on page 11 should be changed to:

OLD: In our model, $\kappa = 1$ corresponds to $K_d = \textcolor{red}{3}2 \times 10^{-4} \text{ m s}^{-1}$ and at $N = 100 \text{ kPa}$ we get $K_{d,\text{eff}} = K_d N_c / N = \textcolor{red}{6}4 \times 10^{-3} \text{ m s}^{-1}$.

Please note that this does not affect any conclusions of the paper.

Values in the appendix (left: value stated in paper, right: correct value with changed parameters):

$$[u] = \left(\frac{\rho_i g a^2 [x]}{C} \right)^{n/(2n+1)} \approx 60 \text{ m yr}^{-1} \quad \Rightarrow \quad 100 \text{ m yr}^{-1} \quad (\text{B1b})$$

$$[H] = \frac{a[x]}{[u]} \approx 4700 \text{ m} \quad \Rightarrow \quad 5000 \text{ m}, \quad (\text{B1c})$$

$$[t] = \frac{[H]}{a} \approx 15 \times 10^3 \text{ yr} \quad \Rightarrow \quad 10^4 \text{ yr}, \quad (\text{B1d})$$

$$[N] = \frac{1}{\mu} C [u]^{1/n} \approx 400 \text{ kPa} \quad \Rightarrow \quad 500 \text{ kPa}. \quad (\text{B1e})$$

$$\alpha_1 = \frac{[H]}{A^{1/n} C L_x^{1/n+1}} \approx 3 \times 10^{-4} \quad \Rightarrow \quad 6 \times 10^{-4}, \quad (\text{B3a})$$

$$\alpha_2 = \frac{C_w [H]}{A^{1/n} C W^{1/n+1}} \approx 4 \times 10^{-2} \quad \Rightarrow \quad 10^{-1}, \quad (\text{B3b})$$

$$\kappa = K_d \frac{\mu N_c}{\rho_w g L_x a} \approx K_d \times 10^4 \text{ s m}^{-1} \quad \Rightarrow \quad K_d \times 6 \times 10^3 \text{ s m}^{-1}, \quad (\text{B3c})$$

$$\alpha_3 = \frac{q_{\text{geo}} [H]}{\rho_w L_h h_0 a} \approx 100 \quad \Rightarrow \quad 60, \quad (\text{B3d})$$

$$\alpha_4 = \frac{C [u]^{1/n} [x]}{\rho_w L_h h_0} \approx 600 \quad \Rightarrow \quad 700, \quad (\text{B3e})$$

$$\alpha_5 = \frac{k \Delta T}{\rho_w L_h h_0 a} \approx 13 \quad \Rightarrow \quad 8. \quad (\text{B3f})$$

$$[u] = \frac{a [x]}{[H]} \approx 500 \text{ m yr}^{-1} \quad \Rightarrow \quad 800 \text{ m yr}^{-1}, \quad (\text{B7c})$$

$$[t] = \frac{[H]}{a} \approx 2000 \text{ yr} \quad \Rightarrow \quad 1200 \text{ yr}, \quad (\text{B7d})$$

$$\gamma_1 = \frac{a^{1/n}}{\rho_i g A^{1/n} [H]^{1/n+1}} \approx 4 \times 10^{-3} \quad \Rightarrow \quad 10^{-2}, \quad (\text{B9a})$$

$$\gamma_2 = C_w \left(\frac{[x]}{W} \right)^{1/n+1} \gamma_1 \approx 0.7 \quad \Rightarrow \quad 1.7, \quad (\text{B9b})$$

$$\gamma_3 = \frac{C a^{1/n} [x]^{1/n+1}}{\mu \rho_i g [H]^{2+1/n}} \approx 120 \quad \Rightarrow \quad 140, \quad (\text{B9c})$$

$$\gamma_4 = \frac{1}{\rho_w L_h} \frac{k \Delta T}{a h_0} \approx 13 \quad \Rightarrow \quad 8, \quad (\text{B9d})$$