

Dear Bjørn Risebrobakken,

Thank you for considering our manuscript for publication in your journal and for your comments regarding the uncertainty of BWT estimates above 4°C. We agree that a reminder of caution is helpful on page 8, line 26-31, and have added a sentence there accordingly. However, we do not think adding a horizontal line at 4°C in the BWT plots would be appropriate. The uncertainty of our estimates increases with temperature, meaning that a value estimated at 4°C may be more accurate than a value estimated at 8°C. This is because the calibration that we used assumes a linear relationship between Mg/Ca ratios and temperature, but an extended temperature range in the calibration data set could eventually show that the relationship is exponential. This would decrease the amplitude of our plot and change the higher absolute BWT values slightly, however the pattern and relative changes in our BWT record would remain the same. In addition, including a line at a specific temperature (4°C) would imply a precise cut-off that is not borne out by the calibration data. As a result, we believe that a horizontal line at 4°C would misrepresent the actual data and the BWT estimate uncertainty. We would thus prefer instead to add another reminder of caution to the figure captions, with reference to the cautionary comment on page 8 (see above).

We hope you understand our concern with your suggestion and remain,

Yours sincerely,
Annalena Lochte et al.