Comment on bg-2021-16
Sebastian Naeher (Editor)

Editor comment on "Revised fractional abundances and warm-season temperatures substantially improve brGDGT calibrations in lake sediments" by Jonathan H. Raberg et al., Biogeosciences Discuss., https://doi.org/10.5194/bg-2021-16-EC1, 2021

Additional comments from Associate Editor:

Thank you for submitting this very interesting manuscript to Biogeosciences. I think the reviewers have some good suggestions and raise interesting questions, some of which I also have, so won't repeat them here in detail.

Further, I wonder if you could provide more details about in situ production of brGDGTs in the lakes vs what is the imprint of brGDGT supply from the lake catchments. The origin of the brGDGTs will determine which parameters can be reconstructed, such as pH in soils vs in the water column, temperatures of different water depths, etc? I also think a more detailed discussion about the reasons for the apparent covariance between conductivity and pH in your dataset would be useful.

I also wonder if there should be more information about global vs regional/location calibrations for the reader that is less familiar with the topic and to explain why you rather extend the global calibration instead of developing another regional calibration that better capture the strong seasonality.