

GMD-2022-9

Thermal modeling of three lakes within the continuous permafrost zone in Alaska using LAKE 2.0 model

Response to Editor

28 Aug 2022

Author's Response:

Thank you for taking the time to handle our manuscript through the submission process over the last 8 months. We have updated the color schemes of Figures in Appendix D and Appendix E as requested by the editorial team. We have also lightly revised the abstract for readability and understanding. In particular we believe the uniqueness of our manuscript and modeling approach is highlighted in Lines 20-33 both in terms of differentiating the modeling from previous studies and in terms of the study results. Specifically the model parameter sensitivity analysis, meteorological variable perturbations, combination of local and remotely sensed input data, and validation using water depths at several depths over several years for three lakes differentiates our work from previous studies. If there are particular aspects of our study that you believe are not well represented in the abstract or if there are particular sentences that you believe need revision please let us know.

26 Aug 2022

Topical Editor decision: Publish subject to minor revisions (review by editor)

by Jinkyu Hong

Comments to the author:

I ask you to revise Abstract carefully because something important of your study is not clearly manifested. I feel that abstract can be improved further for better readability.

Particularly, please revise the abstract by representing

- 1) why this lake modeling is different from previous arctic lake studies (modeling or experiment)
- 2) What are the unique findings of this study compared to other LAKE modeling studies.

Also, I am not a native speaker but I also feel some revision of sentences in Abstract for better understanding.