Supplementary Materials for the manuscript "Continental heat storage: Contributions from ground, inland waters, and permafrost thawing"

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S1 Introduction

This file contains supplementary figures accompanying the manuscript "Continental heat storage: Contributions from ground, inland waters, and permafrost thawing".

S2 Supplementary figures

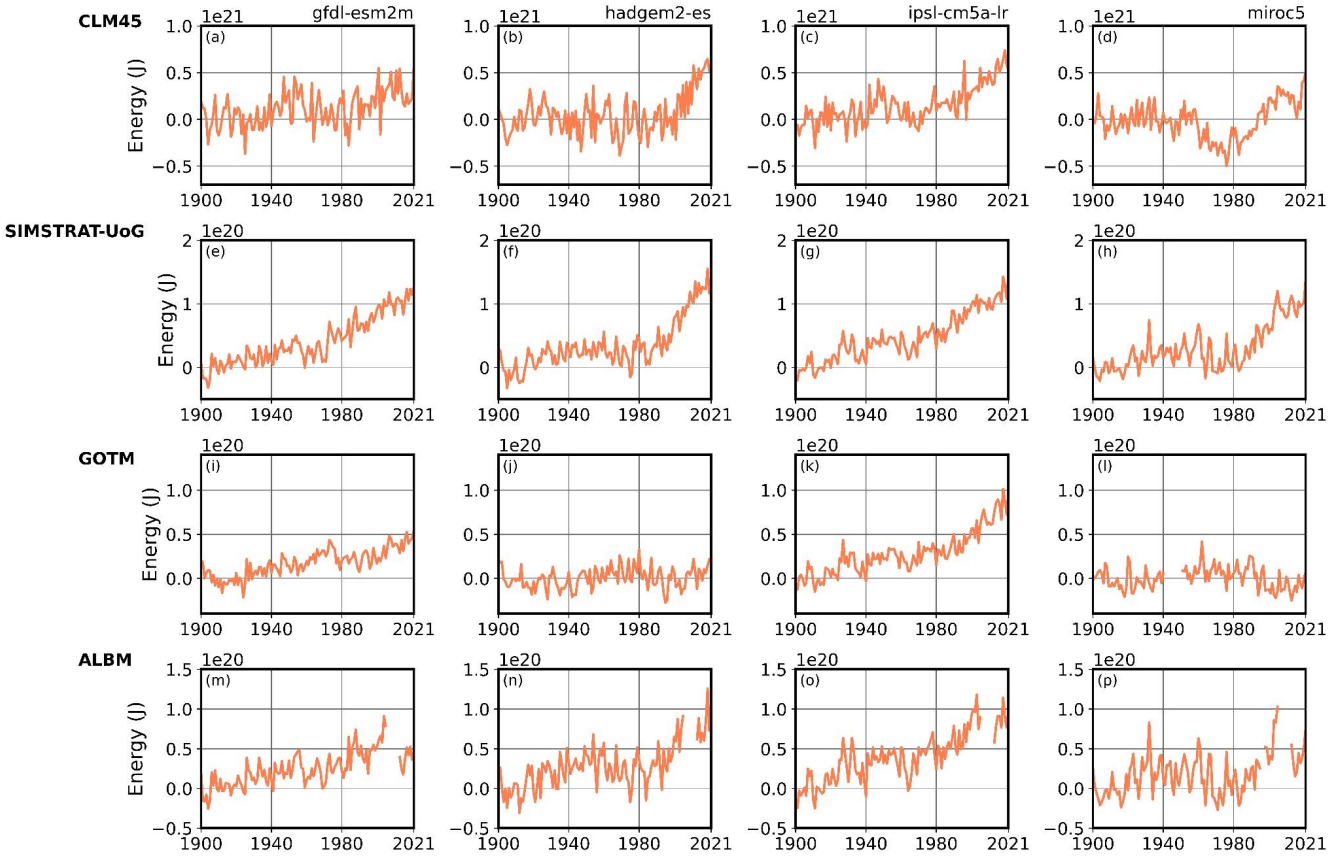

Figure S1: Annual heat uptake by natural lakes for the four global lake models (CLM45; a-d, SIMSTRAT-UoG; e-h, ALBM; i-l, GOTM (m-p) and ESM forcings (GFDL-ESM2M, HadGEM2-ES, IPSL-CM5A-LR, MIROC5; columns) calculated compared to the period 1900-1929. For all forcings, the years 2006- 2012 of ALBM are excluded due to model spin up. Additionally, the years 1996-1997 for the ALBM MIROC-5, and 1941-1950 for GOTM MIROC-5 are excluded. Note the different y-axis scales.

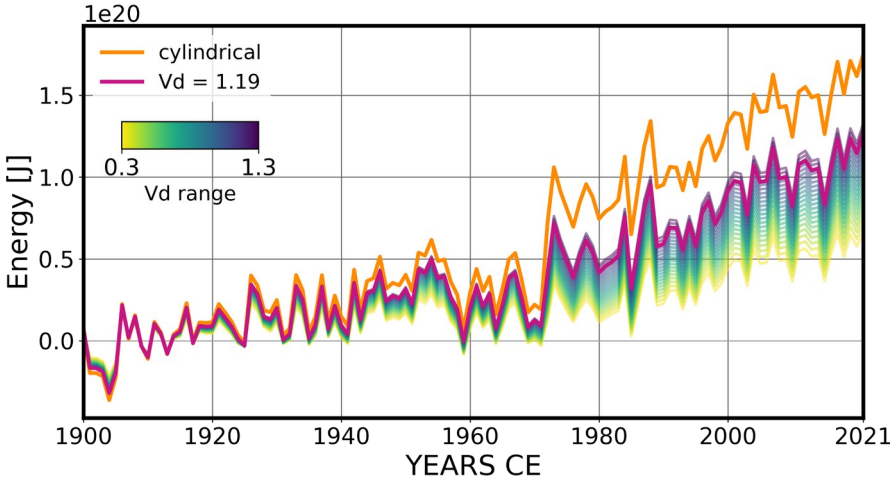

Figure S2: Sensitivity of natural lake heat uptake estimates to the global mean lake morphometry parameter V_d, here shown for the SIMSTRAT-UoG GFDL-ESM2M simulation. The V_d range of 0.3 to 1.3 is based on observations (Johansson et al., 2007). Cylindrical refers to the cylindrical bathymetry assumption employed in Vanderkelen et al (2020).

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References

Johansson, H., Brolin, A. A., & Håkanson, L.: New approaches to the modelling of lake basin morphometry. Environmental Modeling and Assessment, 12(3), 213–228. https://doi.org/10.1007/s10666-006-9069-z, 2007.

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