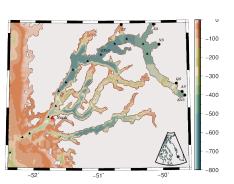
# Modeling of intermediate water mass formation and subsurface heat transport in Godthåbsfjord

J. Bendtsen<sup>1,3</sup>, J. Mortensen<sup>2</sup>, K. Lennert<sup>2</sup> and S. Rysgaard<sup>2,3,4</sup>

<sup>1</sup>ClimateLab,; <sup>2</sup>Greenland Climate Research Centre; <sup>3</sup>Arctic Research Center, Denmark; <sup>4</sup> Center for Earth Observation Science, Canada.

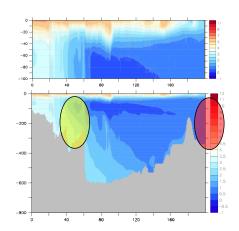




Model domain







Transect of temperature from sill (left) towards the GrIS (right)



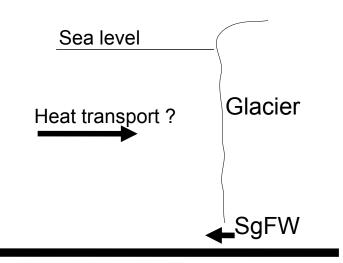
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## Experiment 1: Reducing tidal mixing

Observed and simulated water level

### Experiment 2: Increasing SgFW

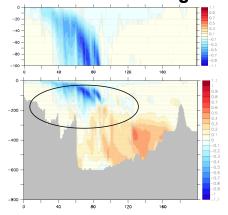


Conceptual figure of boundary conditions for subglacial freshwater discharge

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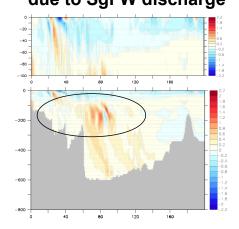
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### Results: Temperature change from reduced mixing



Temperature changes in SrW in late summer

### Results: Temperature change due to SgFW discharge



Temperature changes in SrW in late summer