Supplement of

Improve *i*LOVECLIM (version 1.1) with a multi-layer snow model: surface mass balance evolution during the Last Interglacial

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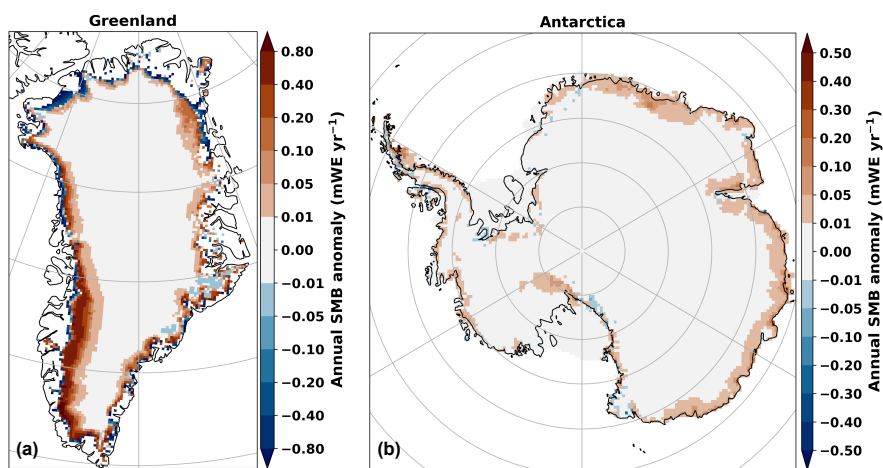
Figure S1. Annual mean SMB anomalies (in mWE yr^{-1}) of BESSI with respect to MAR during the period 1979-2021 for (**a**) Greenland and (**b**) Antarctica.
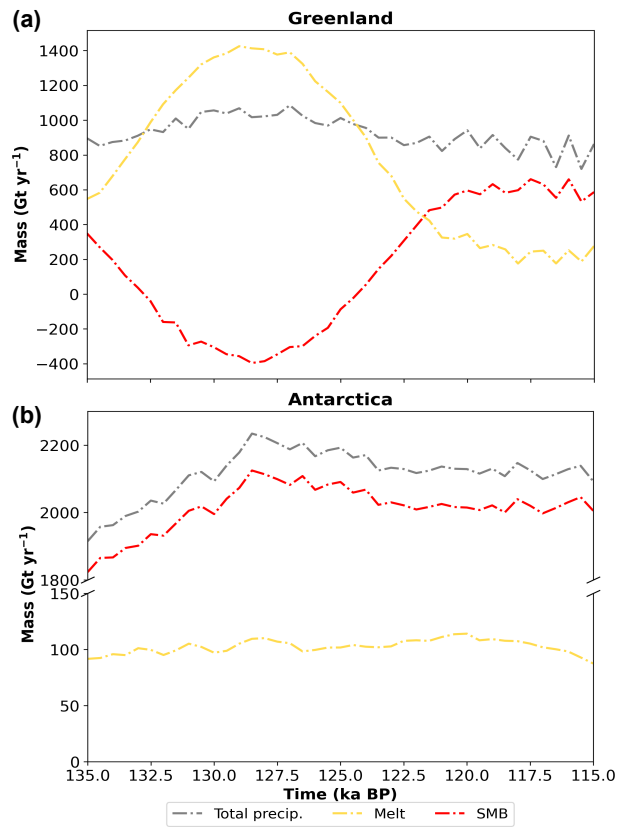
Figure S2. Temporal variation of the annual mean total SMB and its elements integrated on the present-day ice sheet extent of ITM (in Gt yr^{-1}) during LIG for (**a**) Greenland and (**b**) Antarctica.
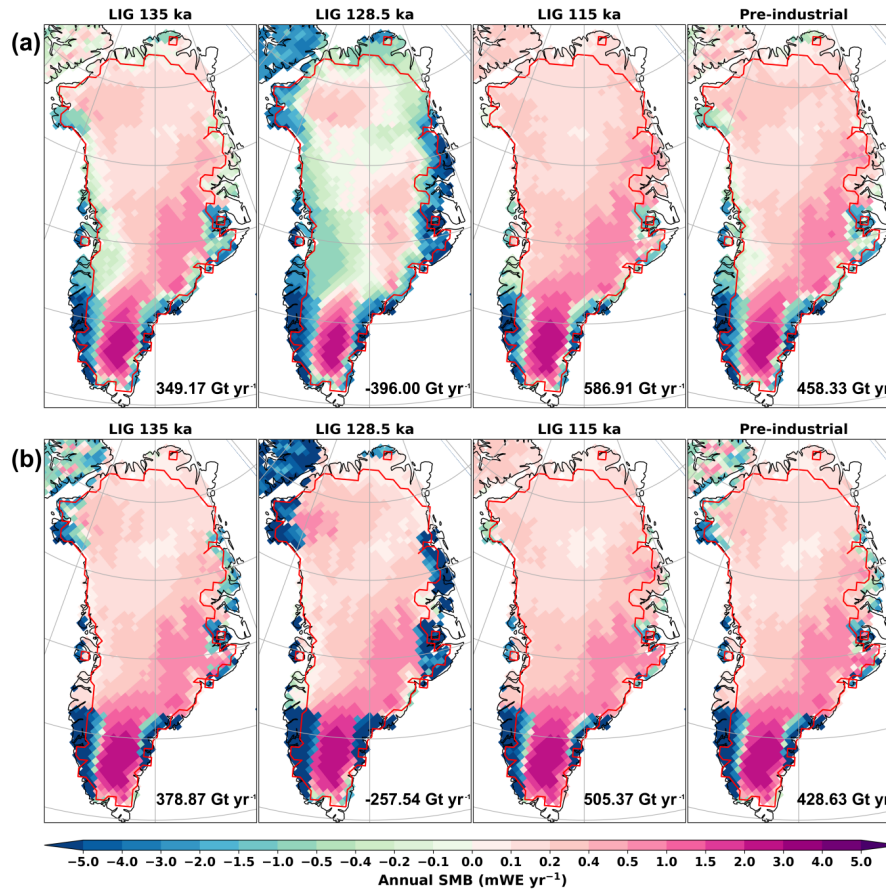
Figure S3. Annual mean SMB (in Gt yr^{-1}) of some LIG time slices (135, 128.5 and 115 kaBP) and the pre-industrial simulation of (**a**) ITM and (**b**) BESSI-*i*LOVECLIM for Greenland Ice Sheet. The total SMB (in Gt yr^{-1}) integrated for the present-day ice sheet extent (red line) is also included.
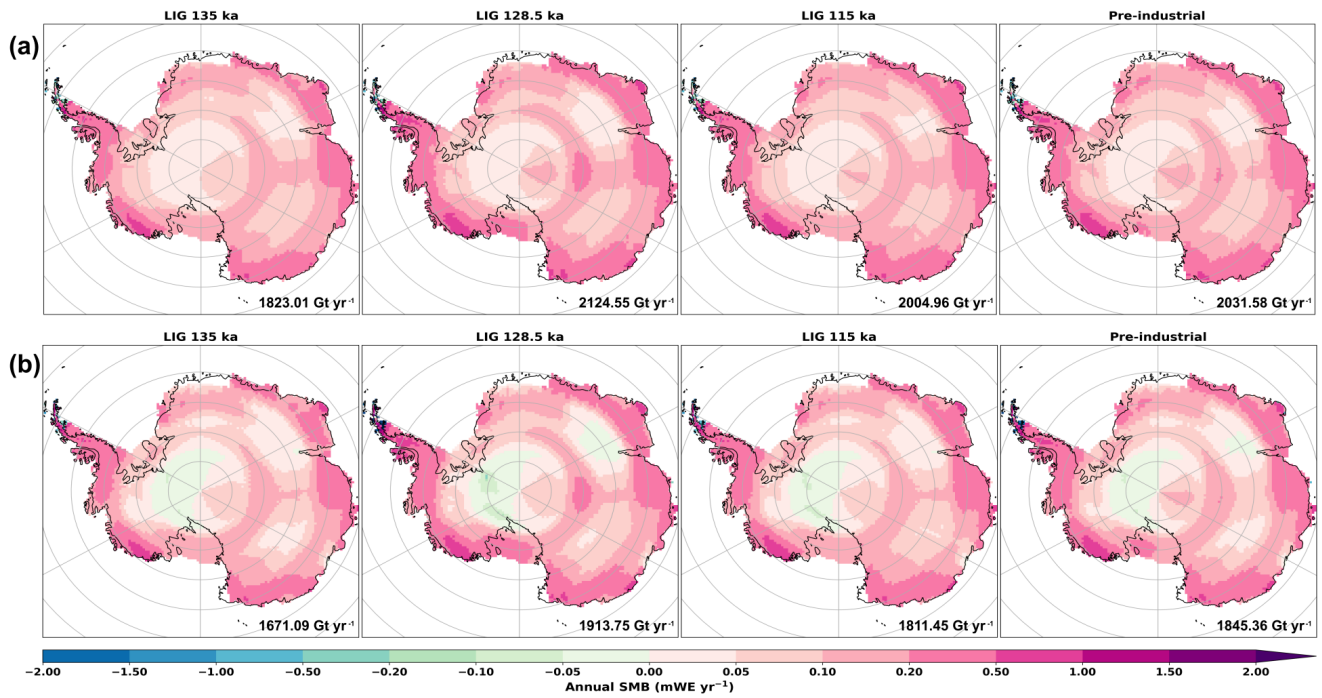
Figure S4. Annual mean SMB (in Gt yr^{-1}) of some LIG time slices (135, 128.5 and 115 kaBP) and the pre-industrial simulation of (**a**) ITM and (**b**) BESSI-*i*LOVECLIM for Antarctic Ice Sheet. The total SMB (in Gt yr^{-1}) integrated for the present-day ice sheet extent is also included.
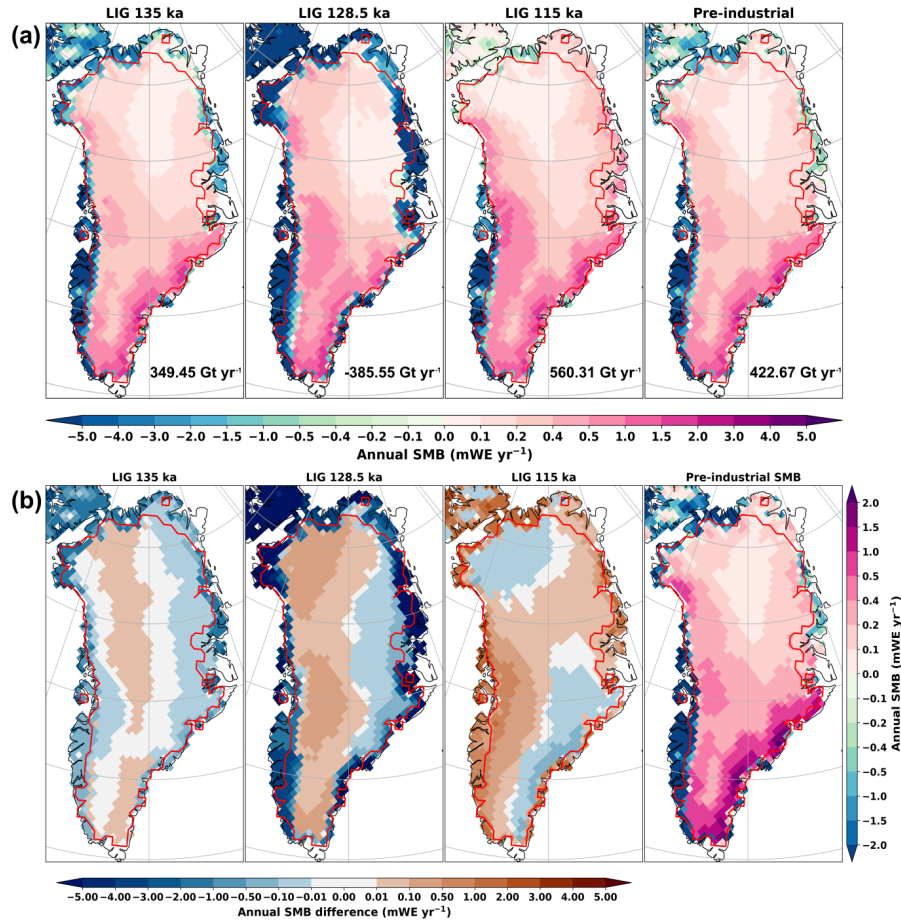
Figure S5. (**a**) Annual mean SMB (in Gt yr⁻¹) of some LIG time slices (135, 128.5 and 115 kaBP) and the pre-industrial simulation of bias-corrected BESSI-*i*LOVECLIM, including the total SMB (in Gt yr⁻¹) integrated for the present-day ice sheet extent (red line). (**b**) Annual mean SMB anomalies (in Gt yr⁻¹) between several LIG time slices (135, 128.5 and 115 kaBP) and the pre-industrial of bias-corrected BESSI-*i*LOVECLIM for Greenland Ice Sheet.