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Reconciling reconstructions and simulations of the Greenland ice sheet and its climate during the Last Interglacial period

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There is still no consensus concerning the evolution of the Greenland ice sheet during the Last Interglacial period (LIG, 130-115 kyr ago). Ice cores indicate that the ice sheet survived over most of the continent. Proxy data indicate temperature anomalies of up to 6-8°C. However, under these conditions, models predict almost complete deglaciation. This paradox must be resolved to be able to quantify Greenland's sea-level contribution during the LIG as well as to understand its sensitivity to future climate change. Here we analyze the available evidence and outline strategies to reconcile modeling and data efforts for Greenland during the LIG.