



North Atlantic overturning and climate response to meltwater forcing during the last deglaciation

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The last deglaciation (~18-11 kyr BP) is an important analog to investigate the response of the Atlantic Meridional Overturning Circulation (AMOC) to future ice-sheet melting and its impact on regional climate change. In this study we present synchronised terrestrial and marine proxy records that provide insight into freshwater run-off and climate variability in the eastern North Atlantic during the last deglaciation. The reconstructions show that atmospheric circulation rather than freshwater forcing primarily controls the stability of the AMOC. However, catastrophic meltwater drainage from the Scandinavian continent may have solicited complex feedbacks necessary to account for the rapid large-scale hydro-climate shifts and the major weakening of the overturning circulation system at the onset of the Younger Dryas stadial.