



A comparison of the climate response to fresh water discharges under glacial conditions

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Glacial abrupt events, such as the Heinrich and Dansgaard-Oeschger events, have been shown to be related to variations in the Atlantic Meridional Overturning Circulation. To better understand the rapid climatic variations reconstructed at locations very far from each other (such as Greenland, the North Atlantic Ocean, the tropical Atlantic, Europe, China), several groups, following earlier works performed with Earth System Models of Intermediate Complexity, have performed experiments in which the AMOC is forced to vary through the imposition of a fresh water flux in the North Atlantic Ocean, under glacial conditions. Here, we propose a first comparison of the results from simulations run under PMIP2 Last Glacial Maximum boundary conditions, with the CCSM3, MIROC3.2, IPSL_CM4, LOVECLIM and HadC3 models. We will focus on the large-scale patterns of the surface temperatures and precipitation responses.