



The impact of H-events on the structure of DO-stadials

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DO-events, the abrupt warming events seen repeatedly during the Last Glacial, are the most extreme climate changes found in the Greenland ice cores. The repeated warming of up to 15 degrees in the course of a few decade are particularly clear during MIS3 (~60-30ka BP). The cold stadial periods, preceding each DO-event, exhibit large variations in duration and structure. The dynamics governing these cold stadials, as well as the abrupt transitions to warm interstadials, has alluded climate scientists since their discovery in the 70s. However, new proxy and model data provide an increasingly detailed view of these events. Here, we will summarize existing reconstructions and simulations of MIS3 with a focus on the cold stadials and the contrast between stadials with H-events (H-stadials) and stadials without H-events (DO-stadials). Studies suggest H-stadials exhibit two phases, different from the relatively stable cold phase of most DO-stadials. Here we investigate whether this could be caused by a delayed release of icebergs and meltwater to the North Atlantic, during a period of extensive Arctic and Nordic Seas sea ice cover, giving a significant reduction in ocean overturning circulation towards the end of Greenland stadials.