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# The synchronization of palaeoclimatic events in the North Atlantic region during Greenland Stadial 3

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Two high resolution marine sediment cores located 83 km apart in the NE Atlantic have been studied: MD95-2006 (Barra Fan; 57˚01.82 N, 10˚03.48 W; 2120m water depth) and MD04-2822 (Rockall Trough; 56˚50.54 N, 11˚22.96 W; 2344m water depth). The records are anchored to the NGRIP ice core stratigraphy and GICC05 chronology by the presence of geochemically characterized Fugloyarbanki tephra. Replicated sea surface temperature (SST) records show evidence for an abrupt and short-lived warming within Greenland Stadial (GS) 3, to which we tentatively assign an age of ca. 25 ka GICC05 b2k. Post-dating this warming event, but prior to the onset of Heinrich Event (HE) 2, SSTs are warmer than during the early stages of GS-3. Equally, abrupt warming in SSTs post-dating GS-3 coincides with Greenland Interstadial (GIS) 2; both cores resolving the double-warming associated with GIS-2 in Greenland ice-core records. Based on these and other marine palaeoclimate records from the Iberian margin and at the mouth of the Norwegian Channel, we propose a new three-fold event-stratigraphy for GS-3 within the North Atlantic region.