



The 14C age of glacial North Atlantic surface waters: Greenland Interstadial Events 2-13

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We present an updated compilation of surface ocean (*Globigerina bulloides*) AMS 14C ages for Greenland Interstadials (GI) 2-13, spanning the interval 25,000 - 45,000 cal BP from the mid-latitude NE Atlantic Ocean. New data from two marine sediment cores located 83 km apart in the NE Atlantic are presented: 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) as well as published data from core MD95-2042 (Iberian Margin; 37°45'N, 10°10'W, 3146 m water depth). Replicated sea surface temperature (SST) records show evidence for abrupt warming events; we correlate these directly to the D/O cycles of the Greenland (NGRIP) ice-core oxygen isotope record. We test the proposed synchronization of two of these records using three geochemically distinct tephra isochrones (NAAZ-1, Fugloyarbanki and NAAZ-2). Our data provide a potentially useful new surface ocean composite record of 14C age from the mid-latitude North Atlantic, suggesting broadly consistent interstadial 14C age data from all three records; and highlight the advantage of tuning mid-latitude SST records to Greenland (tested with tephra isochrones where possible) when constructing marine age-models through this time interval.