

EGU2020-20521

<https://doi.org/10.5194/egusphere-egu2020-20521>

EGU General Assembly 2020

© Author(s) 2021. This work is distributed under the Creative Commons Attribution 4.0 License.



Contrasting style and retreat rates of the northern hemisphere ice sheets during the past two glacial terminations

Edward Gasson¹, Heather Stoll², and Isabel Cacho³

¹University of Bristol, School of Geographical Sciences, Bristol, United Kingdom of Great Britain and Northern Ireland (egw.gasson@gmail.com)

²ETH, Zurich, Switzerland

³University of Barcelona, Spain

Compared with the intensely studied interval of the last glacial maximum and termination, significantly less attention has been given to the preceding glacial period and Termination 2. This is perhaps understandable as the Greenland ice cores do not stretch this far back in time and the terrestrial record of the ice sheets has in part been lost during the subsequent glacial period. However, there are many questions remaining about how these two glacial intervals differed and whether this was important in driving some of the differences between the last interglacial and our current interglacial. Here I will focus on a new speleothem record from northern Spain which records the meltwater-driven $d^{18}O$ anomaly in the eastern North Atlantic and provides an absolutely dated chronology (U/Th) during the penultimate glacial and Termination 2. The character of which differs dramatically from a record for Termination 1 recovered from speleothems at the same site. This record also shows structure during Termination 2 that has not been seen previously. Here I'll discuss some possible reasons for the differences between the two glacial terminations and focus on recent ice sheet model experiments that have been run to try and test these hypotheses.