

Interactive comment on “Mode transitions in Northern Hemisphere Glaciation: Co-evolution of millennial and orbital variability in Quaternary climate” by David A. Hodell and James E.T. Channell

Anonymous Referee #2

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Hodell and Channell present a 3.2 myr long stable isotope and physical properties record at millennial-scale resolution from North Atlantic Site U1308 (reoccupation of ODP 609). The article reviews prior work of the region and it contributes new perspectives due to the high temporal resolution of the data.

I enjoyed reading this manuscript as it provides a succinct review of the pertinent literature coupled with new contributions primarily based on the millennial-scale resolution. There is a lot of information, and the authors manage to convey it in a well written and well organized, easy to read manner. The data and figures are of high quality. The

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manuscript conveys the value of long, highly resolved proxy records in paleoclimate research. In sum, I believe the manuscript is an important contribution to the field tying together much North Atlantic research of the past decades.

Line 1139: d18O symbol

In section 2.3: Perhaps the authors should point out to the reader what the temporal resolution is of the 2 cm sampling interval. Line 149 has this info pertaining to the physical properties, and it would be helpful to have it in context for the stable isotopes as well.

Line 256, define natural gamma ray as NGR in parenthesis.

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