

Interactive comment on “Deglacial intermediate water reorganization: new evidence from the Indian Ocean” by S. Romahn et al.

T. Kiefer (Editor)

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Dear Dr. Romahn, dear co-authors,

Both referee reports are generally positive about your manuscript, but at the same time provide a number of very insightful suggestions how to improve the manuscript, which I encourage you to consider. These include particularly (1) the description of the modern oceanographic setting (incl. Red Sea Water) and its more comprehensive consideration in your interpretation of the conditions during deglaciation; (2) a more detailed presentation and critical discussion of age model aspects; (3) a more differentiated analysis of the similarity of deglacial patterns; (4) discussion of the effect of local productivity changes; (5) avoiding interpretation beyond the evidence available (such as formation rates of intermediate waters).

C2257

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The referees also provide several suggestions for improvements of style and clarity. I am adding some below.

Please consider all comments and post your response to the referee comments. I also encourage you to prepare a revised manuscript version, either together with the response or if you prefer following your the response.

Kind regards, Thorsten Kiefer

Editor's technical comments:

p4036 I24 "intermediate pathway". Be more precise e.g. intermediate water level pathway

p4036 I25: reformulate "is supposed to" and "regulate", e.g. "where entrainment of this extratropical water has a cooling effect on tropical SST ..."

p4037 I5: "could be" instead of "is"

p4037 I26: "coupling" instead of "forcing"?

p4038 I1: "contribute to" instead of "participate in"

p4041 results chapter: Refer to figure 3. Throughout the text you can refer a bit (but not excessively) more to the figures in order to guide the reader more closely.

p4041 I16: Replace "abruptly" with something less dramatic like "rapidly". A change over several hundreds to thousands of years cannot be called abrupt any more, neither in the context of what is societally relevant and at the latest since we have the ice core records not even in the context of past changes.

p4041 I19: "similar" to what?

p4042 I3: What does "surface-based" mean?

p4044 I7/8: Is this sentence referring to deglacial again? If so, please say so.

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p4044 I20/21: Ref for the RC data, also in the figure Fig. 4 caption.

p4044 I26: "benthos-plankton differences" in what? Fauna? benthic-planktonic d18O? Something else?

p4045 I4: "bottom signal" to "bottom water signal"

p4049 I24: "glacial upwelling of isolated Southern Ocean deep water caused ..." upwelling where? and formulate less ambiguously what you mean by isolated.

p4050 I5: "analogue" to "analogous"

p4050 I7: "radiocarbon minimum" of what?

p4050 I9: "precede" unclear

Fig 4: It is a bit unfortunate and counter-intuitive to show the own record in a dashed line here. And provide references for RC records

Following up on comment of referee 1: Generally avoid the uncommon abbreviation of "early Holocene" for better readability. Better spell out throughout the paper.

Interactive comment on Clim. Past Discuss., 9, 4035, 2013.

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