

Interactive comment on “Minor effect of meltwater on the ocean circulation during deglaciation” by G. Lohmann et al.

Anonymous Referee #1

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Thank you for attempting to clear my concern but I'm afraid my main point is still not answered by it. I'll be more specific.

I don't see what kind of "calculation" (line14, page 808 of the paper) or "analysis" (stated in response) has been performed in this study on the ice sheet model output in order to produce the freshwater fluxes. It seems to me such fluxes are just a regular output field of the ice sheet model and can be used "as is". If that is so (and the analysis/calculation refers to what the original paper did), why are the freshwater fluxes in the results section of the current paper? I looked up the Zweck and Huybrechts paper to get some picture of the distinction of this work from theirs and actually found Fig 2 in much the same form in that paper, except for the time axis. The current paper does not state that the fluxes and Fig 2 have been published before. I'm sure it is not intentional,

C401

but it is misleading when the fluxes are presented in the results section and discussed in more details than the ocean model output.

To me it seems that there is nothing new in the freshwater fluxes that warrants it to be in the results section of this paper. Unless the authors can argue why they are a result of this study, it should go in the experimental design section and be clearly stated as output from another study that is input into this one. This discussion of the peaks in the times series should also not be in the results section as it is not a discussion of results of this paper.

If my suggestions of a bit more analysis to clarify the role of the freshwater on the ocean dynamics, and the other reviewer's suggestion of some sensitivity experiments are addressed, then there should be quite a few interesting points to make about the part of this paper which is actually original here.

I hope this clarifies my concern and good luck with the revision.

Interactive comment on Earth Syst. Dynam. Discuss., 3, 801, 2012.

C402