

2nd Review: Freshwater Routing In Eddy-permitting Simulations Of The Last Deglacial: Impact Of Realistic Freshwater Discharge, by Love et al.

Compared to the earlier version, the revised manuscript has been improved but I still have some rather minor comments which are listed below. Please note that, I used the file with track changes and the line numbers refer to that file.

Title: Needs modification. You do not simulate the Last Deglacial

Line 9-11: “We focus particularly...” Not clear, re-write. Also better to merge this sentence with lines 13-15.

Line 41-42: “The more than ...” sentence is incomplete or missing something

Line 95: “...has been shown to have global impacts...” replace global with large-scale. You can also cite Karami et al. (2021) where they study the impact of Arctic gateways.

Note that you often use two sets of brackets to cite a paper instead of one set.

Line 196: I do not know if it helps your arguments here, but in Karami et al. (2021) they show that gateway fluxes, surface properties and the sea ice reach semi-equilibrium after 35 years (they use a different model though).

Line 232: Please explain why the OBS simulation has a larger sea ice extent?

Lines 280-290: results concerning CBS versus OBS are consistent with Karami et al. (2021). Please see the mentioned reference for the explained dynamics as well as the results for closing/opening CAA.

Line 347: what do you mean by “with the possible exception”?

Line 409: “larger impacts” largest?

Any suggestions/comments about what we can learn from this study for the future climate?

Reference:

Karami, M.P., Myers, P.G., de Vernal, A. et al. The role of Arctic gateways on sea ice and circulation in the Arctic and North Atlantic Oceans: a sensitivity study with an ocean-sea-ice model. *Clim Dyn* (2021). <https://doi.org/10.1007/s00382-021-05798-6>