

Minor revision of the manuscript "AMOC Stability Amid Tipping Ice Sheets: The Crucial Role of Rate and Noise"

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We thank the reviewer for the positive evaluation of the revised manuscript.

As proposed by the editor, we have rewritten the discussion to clearly state that our quantitative results are likely to change in comprehensive models. This can be found in L309-316 of the trackchanges version of the manuscript:

'... On the other hand, only part of the AMOC dynamics is represented in a box model. In a more realistic setup, our quantitative results regarding rate and noise-induced effects would most likely be challenged and vary among different models. Indeed, comprehensive models display an important range of sensitivities to northern (Jackson et al., 2023) and southern (Swart et al., 2023) freshwater fluxes. Furthermore, the AMOC tipping point varies substantially in different Earth system Models of Intermediate Complexity (EMICs) (Rahmstorf et al., 2005), and was only recently found in a Global Circulation Model (Westen and Dijkstra, 2023). As a first step, a direct extension of this study would be to investigate how the results compare to those obtained in EMICs which, as in our case, can be obtained within a realistic computational time and using only prescribed meltwater fluxes.'

Note that references to Jackson et al. (2023); Swart et al. (2023); Rahmstorf et al. (2005) and Westen and Dijkstra (2023) were added to this version of the manuscript. Finally, a few typos have been corrected.

Sincerely,

The authors

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