

Interactive comment on “ESD Ideas: The Peclet number is a centerstone of the orbital and millennial Pleistocene variability” by Mikhail Y. Verbitsky and Michel Crucifix

Anonymous Referee #1

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Review of “ESD Ideas: The Peclet number is a centerstone of the orbital and millennial Pleistocene variability” by Verbitsky and Crucifix

Recommendation: Minor revisions

This short paper presents a plausible mechanism how ice sheet dynamics can affect Pleistocene variability on orbital and millennial time scales. This is a nice contribution to this important topic. The manuscript is well written and should be considered for publication in ESD.

I have only one question. In your model Eqs. (1)-(5) you represent two ice sheets (Laurentide and Greenland) which are independent from each other. To which extent

can the Laurentide and Greenland ice sheets be considered to be independent from each other considering their close proximity? It seems to me that the whole argument rests on this assumption. Or could Greenland be substituted with Antarctica (or would the size of Antarctica change the dynamics)?

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Discussion paper

