

Answer to the editor

We thank the editor again for her careful reading of the manuscript. All ms changes in response to the editor suggestions are in red.

General comments

We rewrote the section part from line 407-416.

We revised the "Summary and conclusion" section completely.

We corrected the mentioned lines.

Figure captions were increased.

We enlarged Fig. S2.

Minor

We moved the data source into the Acknowledgement and added a sentence to thank the reviewers and the editor.

We corrected all lines according to the suggestions of the editor.

Detailed comments on editors questions:

LN 405: RASM uses an energy-conserving ocean model with a rotated sphere mesh with the equator extending across the North Pole, resulting in a ca 9 km resolution in the Arctic Ocean. Therefore no divergence pattern problem at the pole occurs.

LN 407-416 were rewritten see above.

LN 424-438 were rewritten.

LN 466 was improved.

LN 480: Volume tendencies have been explained.

LN 496 was better explained.

LN 481-526 were rewritten. The presented Fig. 14 was specifically developed to capture a metric of thermodynamical and dynamical changes of the ensemble members.

LN 555-571: We improved the text. The suggested changes in energy budget effects on TD and Dyn are beyond the scope of this paper, since they would require additional ensemble simulations for that winter.

Conclusions 573-637 were rewritten completely, see above.