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Biogeosciences Discussions

Interactive comment on "Control of primary production in the Arctic by nutrients and light: insights from a high resolution ocean general circulation model" *by* E. E. Popova et al.

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Comment: Page 5558 line 24: ... primary production (and) these two factors, ...

Response: corrected

Comment: Page 5569 line 25. Question: The model gets more ice in the Barents Sea and the authors think the reason is Atlantic Water flow too far north. But the Atlantic Water is warm water, it should melt more ice rather than has more ice.

Response:

The reviewer is right, we replaced the sentence in question with the following one:

"This is because the simulated Atlantic water inflow in the western Barents Sea is colder than the observed, consequently about 20 percent less heat is available to melt sea ice. However the sea ice bias is not of significance for this study, as its concentration and thickness are low, less than 0.20 and less than 10 cm respectively."

Comment: 3) Page 5577, line 12. Question: The modeled production in ice province and Arctic total are 211 and 626, respectively. So the ice province contributes less than 40%, and maybe not to be called a major contributor.

Response: "a major contributor" replaced with "an important contributor"

Interactive comment on Biogeosciences Discuss., 7, 5557, 2010.