

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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This manuscript presents ecosystem results from a high resolution OGCM. The paper is as long as a book chapter with very comprehensive review of the ecosystem model results, comparisons with observations and discussion on controls of the primary production in the pan-Arctic regions. I find it a very good paper and deserve immediate publication.

Here are one minor revision and two questions for the authors: 1) Page 5558 line 24: ... primary production (and) these two factors, ... 2) Page 5569 line 25. Question: The model gets more ice in the Barents Sea and the authors think the reason is Atlantic

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Water flow too far north. But the Atlantic Water is warm water, it should melt more ice rather than has more ice. 3) Page 5577, line 12. Question: The modeled production in ice province and Arctic total are 211 and 626, respectively. So the the ice province contributes less than 40%, and maybe not to be called a major contributor.

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