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 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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