

## ***Interactive comment on “Field-obtained carbon and nitrogen uptake rates of phytoplankton in the Laptev and East Siberian seas” by Sang Heon Lee et al.***

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Interactive comment on “Field-obtained carbon and nitrogen uptake rates of phytoplankton in the Laptev and East Siberian seas” by Sang Heon Lee et al.

Anonymous Referee #2 Received and published: 17 August 2017 The manuscript “Field-obtained carbon and nitrogen uptake rates of phytoplankton in the Laptev and East Siberian seas” by Lee et al. compared their measurements of nitrate, chl-a, and primary production rates in the Laptev and E. Siberian Seas with those from other studies. Due to short period of observations at each location and time, the comparisons are still quite rough for annual primary production estimate, but do

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provide a reference for these understudied regions compared to other parts of the Arctic Ocean. I recommend publish it with some revisions. One suggestion is to add more discussion and figures showing some vertical profiles of the nitrate and chl-a concentration in the upper (100–50%) and lower (50–1%) photic depth, because there are large differences between them as described in the paper. The vertical differences of nutrient and chl-a might be another factor that affected the spatial differences of primary production among stations. =>As the referee # 2 suggested, we added new figures for the vertical profiles of the nitrate and chl-a concentration within the euphotic depths and discussed more on them in the results and discussion section (line 151-157, line 178-185, line 257-266, line 313-316, line 319-326, and line 340-352). Other minor revisions: Line 16 ‘Field-measured ’ change to ‘Field measurements of ‘. => We revised it in line 16. Add the year and month of the measurement in this sentence. => We added the year and month in line 18. Line 78 remove ‘Field-measured’ => We removed it in line 81.

Please also note the supplement to this comment:

<https://www.biogeosciences-discuss.net/bg-2017-234/bg-2017-234-AC2-supplement.pdf>

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