

Interactive comment on “Phytoplankton and dimethylsulfide dynamics at two contrasting Arctic ice edges” by Martine Lizotte et al.

Anonymous Referee #1

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“Phytoplankton and dimethylsulfide dynamics at two contrasting Arctic ice edges” by M. Lizotte et al. was reviewed.

In this paper, the authors focused on the relationship between phytoplankton and DMS dynamics at the different type of icescapes, i.e. ice edges dominated by first-year and multi-year ices. The authors well documented the different characteristics for DMS production between the icescapes. In general, this paper is suitably written and I totally agree with the authors’ discussion. I recommend that this paper will be published in this journal after small correction of technical issues.

Specific comments Page 4, Line 115: “Sound” → “sound”. The same errors can be found. Please correct it.

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Page 4, Line 148: The term “chl a” is firstly mentioned here. The authors mentioned the abbreviation at Page 5 Line 155, but it should be shown here. Also, the abbreviations are shown as both “chl a” and “Chl a”. Please unify the abbreviation.

Page 5, Line 156: “onto 25-mm filters” → “onto a 25-mm filter”

Page 5, Line 156: Phytoplankton pigments were extracted. . . → Phytoplankton pigments on the filter were extracted. . .

Page 5, Lines 168-170: This sentence should be reconsidered. The authors may merge the measurement steps of both natural sample and standard in error.

GC column: Please indicate the type of GC column of two GC systems.

Page 6, Line 189: What is the “proprietary trap” here? Please explain the detail.

Figure 2: The size of letters on the map are too small. Please resize it.

Figure 10: For FYI diagram, the relationship between phytoplankton bloom and light availability is clearly indicated, but I’m afraid that the reader may not catch what the authors would like to show in MYI diagram. Please modify the MYI diagram to show the relationship of phytoplankton abundance and light availability. Also, the second sentence (How these physical changes. . .) may be omitted from the figure caption.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2019-422>, 2019.

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