

## ***Interactive comment on “Towards the Marine Arctic Component of the Pan-Eurasian Experiment” by Timo Vihma et al.***

**Anonymous Referee #2**

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The manuscript by Vihma et al. describes a marine Arctic component (MA-PEEX) as supplement to the existing terrestrial/atmospheric the Pan-Eurasian Experiment (PEEX) and coastal the SMEAR (Station Measuring Ecosystem-Atmosphere Relations) concepts. The authors' main selling point is that they are going to investigate the behavior of the physical and biogeochemical processes to improve the ocean component of an Arctic observing system based on the marine meteorological, sea ice, and oceanographic observations for the Arctic Ocean itself. In the same time, the SMEAR concept can be applied in coastal and archipelago stations, such as Tiksi, Cape Baranova, etc. The topic of the study is highly interesting and has potential. I also think that the exercise has an obvious practical value. However, I have concerns about the manuscript.

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In my view, this document is more like a proposal or 'letter of intent' rather than usual research paper. Ultimately, this is an editorial decision, but the topic appears more appropriate for another journal than ACP. For example, I used to see such papers in Bull. Amer. Meteorol. Society (BAMS).

In my opinion, the manuscript in the current form is quite bulky, poorly composed, has repetitions, rough, and not easy to follow. There are too many abbreviations in the paper. It sometimes is overwhelming for the readers. Some are not necessary, please refrain from using abbreviations unless unavoidable. Apparently, this is due to the fact that the manuscript is a compilation of different parts prepared by different contributors. Because their result implies something important, I don't think the paper should be rejected. I recommend the authors try to improve the paper in a major revision. I think that the authors should consider reworking the manuscript completely; the paper should be re-elaborated in depth, reduced in size, and be re-written by one co-author in a coherent manner before re-submission.

Either way, my specific comments for a future version are listed below. This is by no means a complete list.

Page 5, line 2. Degree sign for 70 N should be superscript.

Page 5, line 31. Define 'PP' (twice).

Page 20, lines 5 and 7. Introduce the abbreviation 'ECDA3' on first occurrence.

Page 20, line 28 and page 21, line 17. Abbreviation 'LNG' is not defined.

Page 20, line 30. Replace 'Krai' by 'Region' similar to 'Magadan Region' in this line.

Page 21, lines 2, 4, 5, 7. Replace 'Oblast' and 'Krai' by 'Region' similar to 'Magadan Region' on page 20, line 30.

Page 21, line 21. Replace 'Sakhalin' by 'Sakhalin Island'.

Page 22, line 28. There is no 'Sakhalin Sea' in the nature. Do you mean 'Sakhalin

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Gulf'?

Figure 4. I believe that the labels on the map should be in English and not in Russian.

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Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-524>, 2018.