

Interactive comment on “New particle formation events observed at the King Sejong Station, Antarctic Peninsula – Part 2: Link with the oceanic biological activities” by Eunho Jang et al.

Anonymous Referee #3

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The current paper of Jang et al (2018) shows some interesting data from the King Sejong Station in Antarctica. Whilst the data are of great interest (although some already published in the same journal last year), this is an additional analysis. However, the paper in its current form is not suitable for publication, I reject this paper but I suggest a resubmission in a lower impact journal, or a more in depth analysis before considering it suitable for ACP.

Specifically, only 38% of the data are analysed, and conclusions are made but not well supported in its current form. I suggest to analyse the whole dataset and to present a whole analysis, including air masses arriving from other sectors, including peninsula,

C1

and weddell sea and all the South regions not currently included.

As regards of the filter data, there are only few months of data presented, this should be stated in the abstract, so the reader know what type of analysis is carried out, this is not a long term monitoring as it is stated.

Two points should be also discussed. 100 ng m³ may be too high (usually it is used 10, 20, max 40 ng m⁻³) and local penguin emissions near the base should also be discussed.

The literatura review is also not very complete, the current issues debated in the literatura now well discussed and summarised (pinguing emissions, marginal sea ice emissions, chemical involved in the emissions as pointed out in the comment by Dr. J Allan).

In summary, the authors need to carry on a more in depth analysis with the whole dataset available, and in particular the 100% of the air masses coming from all sectors, so the reader can really undertand the whole oceanic activities, and not a very minor part presented.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-1181>, 2018.

C2