

Interactive comment on “Particulate trimethylamine in the summertime Canadian high Arctic lower troposphere” by Franziska Köllner et al.

Anonymous Referee #2

Received and published: 6 July 2017

The manuscript presents a very interesting and comprehensive study, reporting the chemical composition of Arctic summertime aerosol, focusing particularly on TMA presence, defining particle origin, size and distribution. The chemical data are combined with important meteorological parameters and elaborated by proper methodologies. The discussion is extensive, clear and effective. For these reason I suggest its publication in ACP. I have only some minor questions: Do the number of collected particles was similar at the different altitudes? (Maybe I missed this information) I think you should have a comparable number of particles collected at different altitude level in order to assure representativeness. Although the results are very interesting, you analyzed only 7412 particles...how this small number could be considered represen-

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tative for summertime Arctic aerosol? You discussed TMA but there are other type of amines which were not investigated and which could help in source apportionment studies...why didn't you consider other compounds (eg. Amino acids)? Why did you analyze backward trajectories only on 4,7 and 8 July? It would be better to clarify these points in the respective sections.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2017-505>, 2017.

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