

Interactive comment on “Community composition and seasonal changes of archaea in coarse and fine air particulate matter” by Jörn Wehking et al.

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RC#1: The authors investigated the 16S-rRNA of airborne archaea with Illumina sequencing from atmospheric coarse and fine particulate matter samples and show seasonal dynamics and discuss anthropogenic influences on diversity, composition and abundance of airborne archaea. The topic of this manuscript is welcomed, and the settings of the experiments are acceptable. However, the data presented in the manuscript, some 16S rRNA gene sequences and several physicochemical parameters, are too less to support a full-length scientific paper. Specific comments: Page 9 line 18: “Candidatus Nitrososphaera” should be “Candidatus Nitrososphaera” Page 10 line 6: “Nitrososphaera” should be “Nitrososphaera” Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2017-514>, 2017

C1

AC: We thank the referee for reviewing our study and will follow all specific comments for improvement as detailed below. With regard to the amount and relevance of the presented data, however, we do not agree with the reviewer’s assessment. In an earlier article that underwent peer review, public discussion and publication in BG, we had presented, a Sanger sequencing data set with 435 Archaea sequences. In the present study, we present, analyze and discuss an Illumina sequencing data set with 2,341 sequences. To the best of our knowledge, this is the largest published dataset on airborne Archaea, and we are confident that the results and conclusions of our study are valid and merit publication in a regular research article.

Specific comments - Page 9 line 18 and Page 10 line 6: We agree and italicize both names.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2017-514>, 2017.

C2