

***Interactive comment on “Uptake selectivity of Methanesulfonic Acid (MSA) on fine particles over polynya regions of the Ross Sea, Antarctica” by Jinpei Yan et al.***

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Thanks very much for providing the meaningful previous studies. I have viewed the references carefully. The experiments of heterogeneous condensation of gaseous MSA on NaCl, sea salt particles, calcium carbonate and kaolinite particles were very important to understand the uptake of MSA on different particles. It concluded that the uptake coefficient of gaseous MSA onto the NaCl and sea salt particles were too low, however, high MS- concentrations in the aerosols were observed in the marine atmosphere. It indicated the reactive uptake of DMS on existing particles would be the major route of the particulate MSA formation in the field marine atmosphere. That is the rea-

C1

son caused the discrepancy of MSA uptake on different particles. Further simulation experiments on the reactive uptake of DMS on different particles are required to clarify the mechanism of the oxidation of DMS on different particles. The previous studies provided important information on the conversion of gaseous MSA to particulate MSA, which is useful to update the knowledge of the manuscript.

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C2