Atmos. Chem. Phys. Discuss.,
https://doi.org/10.5194/acp-2019-259-SC1, 2019
© Author(s) 2019. This work is distributed under
the Creative Commons Attribution 4.0 License.

Atmospheric Chemistry and Physics Discussions

Interactive comment on "First direct observation of sea salt aerosol production from blowing snow above sea ice" *by* Markus M. Frey et al.

Lars Kalnajs

kalnajs@colorado.edu

Received and published: 3 June 2019

This manuscript describes an interesting set of measurements and detailed analysis confirming the blowing snow as a significant source for sea salt aerosol in the vicinity of sea ice in coastal Antarctica. We agree that this is an important result with significant implications for polar tropospheric aerosol loadings and heterogeneous halogen chemistry. However, it would be helpful to both the authors and readers of this article to refer to prior work also published in ACP showing similar results from measurements taken on sea ice in the Ross Sea. Giordano et al., 2018 also clearly identifies blowing snow on sea ice as a significant source of chlorine rich sea salt aerosol from online Aerosol Mass Spectrometer measurements of aerosol composition, optical measurements of blowing snow and interstitial aerosol concentrations and offline measurements of sur-

Printer-friendly version

Discussion paper

face and blowing snow composition. The consistency between the results from observations using different techniques and on opposite sides of the Antarctic continent further indicates the importance of this mechanism to the overall Antarctic aerosol budget.

Lars Kalnajs and Peter DeCarlo

Reference:

Giordano, M. R., Kalnajs, L. E., Goetz, J. D., Avery, A. M., Katz, E., May, N. W., Leemon, A., Mattson, C., Pratt, K. A., and DeCarlo, P. F.: The importance of blowing snow to halogen-containing aerosol in coastal Antarctica: influence of source region versus wind speed, Atmos. Chem. Phys., 18, 16689-16711, https://doi.org/10.5194/acp-18-16689-2018, 201

Interactive comment on Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2019-259, 2019.

Printer-friendly version

Discussion paper

CC BY