

Interactive comment on “Halogen species record Antarctic sea ice extent over glacial-interglacial periods” by A. Spolaor et al.

Anonymous Referee #1

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Review of “Halogen species record Antarctic sea ice extent over glacial-interglacial periods”

By Spolaor et al.

This manuscript presents the first measurements of bromine and iodine, and their speciated species, concentrations from the TALDICE ice core, Antarctica, over the last 250 ky. The current knowledge of emissions, deposition and subsequent recycling of bromine and iodine species over Antarctica is used here to infer information on the past variability of Antarctic sea ice extent. Both the measurement and the methodological approach to relate halogen concentrations in the ice core to sea ice extent are highly unique and original. The paper is well written and structured and it will be of interest to a wide range of scientist Therefore, I recommend this paper to be published in ACP as

C1738

is, with only some minor suggestion/question for the authors below:

- %Brdep is anti-correlated to the temperature proxy, during the warmer periods the boundary layer dynamics and mesoscale transport may have been different. This in turn may have altered wind speeds and thus transport time scales from the Antarctic coast to TD. Have the authors considered such possibility and how would that affect the interpretation of the measurements?

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 3881, 2013.