

Interactive comment on “A mechanism for biologically-induced iodine emissions from sea-ice” by A. Saiz-Lopez and C. S. Boxe

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I would like to make another comment on the iodine diffusion flux calculated by Saiz-Lopez and Boxe. The authors propose that the diffusion takes place in the brine channels connecting the ocean with the ice surface. They calculate a flux inside these channels. To calculate the total flux (per square meter of the ice surface), it would be necessary to know what fraction of the sea ice surface is connected to the ocean via these brine channels. I could not find this information in the paper.

In addition to diffusion, it may be that convection also contributes to the transport. Useful references to investigate this further could be, e.g.:

- W. S. Reeburgh (Polar Biol., 3, 29-33, 1984)

S1447

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- Mercier et al. (Cold Reg. Sci. Technol. 42, 968211;105, 2005)
- Worster (Geophys. Res. Abstr., 8, 01488, 2006)

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 2953, 2008.

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