

***Interactive comment on “A review of sea spray aerosol source functions using a large global set of sea salt aerosol concentration measurements” by H. Grythe et al.***

**Anonymous Referee #1**

Received and published: 12 October 2013

The paper gives a very nice overview of many of the used parametrisations of the source functions for SSA in the litterature, and based on results by the flexpart model the paper comes with the best estimate of a new source function.

First a minor comment about misspelling: the last line on page 20744 there are two misspelled Words.

But I have some large comments to the paper. There are some references in the paper to maartensson et al 2003. But it is only concerning the temperature dependence of the source functions. But the paper also give an expression of the source function of SSA.

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for SSA for the fine fraction of SSA. The EMEP model are using this source function for the fine fraction of SSA combined with the source function of Monahan for the coarse fraction. I think it could improve the paper if it also include this combined Mårtensson/Monahan source function was used as described in Tsyro, S., Aas, W., Soares, J., Sofiev, M., Berge, H., and Spindler, G.: Modelling of sea salt concentrations over Europe: key uncertainties and comparison with observations, Atmos. Chem. Phys., 11, 10367–10388, doi:10.5194/acp-11-10367-2011, 2011.

Furthermore it could be nice if the different source functions in the appendix was more clearly separated f.ex by headlines (M86, S11, S11F etc). It will make it easier to find the different source functions in the appendix

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Interactive comment on Atmos. Chem. Phys. Discuss., 13, 20729, 2013.

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