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Interactive comment on "Ambient aerosol concentrations of sugars and sugar-alcohols at four different sites in Norway" *by* K. E. Yttri et al.

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I appreciate the paper by Yttri et al. (2007) as an important contribution to the characterization of the biogenic components of atmospheric aerosols and would just like to add a comment on their statement on page 5772, lines 24-29, regarding the study of Elbert et al. (2006).

Please note that the global emission estimate of Elbert et al. (2006) for actively discharged basidiospores does neither imply nor depend on a simple extrapolation of results from tropical rainforests to (sub-)arctic regions. In fact, it is based on a comprehensive survey of studies from all over the world reporting on emissions and atmospheric concentrations of actively discharged basidiospores and the sugar alcohol mannitol - including an earlier conference proceedings article with relevant data from

Norway by Yttri et al. (2005).

Elbert et al. (2006) have made fairly conservative assumptions in their emission estimate calculations, and explicitly pointed out that in tropical regions the abundance of fungal spores and related chemical compounds are typically higher than in extratropical regions. Therefore, I think that the statement of Yttri et al. (2007) about the feasibility of extrapolations (p. 5772, l. 28-29) is not really adequate in this form and context.

Nevertheless, I fully agree - and it had also been pointed out in the article by Elbert et al. (2006) - that further studies on these subjects are required to corroborate the first estimate and elucidate the actual abundance and effects of fungal spores, carbohydrates and other primary biogenic aerosol particles and components in the atmosphere.

References:

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Yttri, K. E., Dye, C., and Kiss, G.: Ambient aerosol concentrations of sugars and sugar-alcohols 5at four sites in Norway, Nordic Society for Aerosol Research (NOSA) Aerosol Symposium, Göteborg, Sweden, 2005.

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