

Interactive comment on “Is forest management a significant source of monoterpenes into the boreal atmosphere?” by S. Haapanala et al.

S. Haapanala et al.

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The authors wish to thank Anonymous Referee #2 for taking the time to review the manuscript. We have answered the comments below. The citation from the referee has been written inside quotation marks.

“The manuscript entitled “Is forest management a significant source of monoterpenes into the boreal atmosphere?” is a well written paper where the authors investigate if timber felling is a significant source of terpenoid emissions. However, the sample size of the data presented is really small neither to conclude anything nor to use the emissions for modeling studies.”

We agree that the data set acquired in the study is small compared to e.g. data sets

C5421

common in carbon dioxide flux studies. This is due to the practical constraints as each flux measurement requires two samples needing preconditioning, manual sampling work in the field, and laborious chemical analysis in laboratory. As the data is rather unique we however feel that it is worth publishing and can help to answer the main question of the paper: can forest management be a significant source of VOCs into the atmosphere. While the uncertainty can be large, as stated in the manuscript, it still constrains the range of expected emissions: The monoterpene emission due to forest cutting in Finland is likely to be in the range of around 10 % of the emission from intact forests, not 1 % or 100 %.

Interactive comment on Biogeosciences Discuss., 8, 8067, 2011.

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