

***Interactive comment on* “Changes in monoterpene mixing ratios during summer storms in rural New Hampshire (USA)” by K. B. Haase et al.**

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General comments:

The paper by Haase et al. presents the impact of the storm related conditions on the monoterpene mixing ratios. This can be classified under mechanical/physical stress which can induce strong emission of monoterpenes. Based on temporal variation of monoterpene mixing ratios, the storm events were evaluated and categorized. Under warm and calm conditions, substantial changes in monoterpene mixing ratios were encountered which could impact the local atmospheric chemistry and SOA formation. Since such storm events are predicted to be frequent under future climate conditions, this investigation is particularly useful to gauge the response of forest to this particular physical stress. The paper is well-written, and should be published.

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Specific comments:

Experimental:

-If the measurement cycle with PTR-MS is 7.25 minutes (page 20636, line 7), how could the data be averaged over a 5 min time period (page 20637, line 12).

-Page 20637, line 14-15, I am not sure if Talbot et al., 2011 is it the right reference as the cited reference deals with particulate mercury.

-Since the authors have evaluated the change of the atmospheric monoterpene mixing ratios and not the emission rates from branch enclosure systems under storm influence, the eventual burst of the soil and leaf litter monoterpene emissions under these conditions should also be considered and discussed.

- By looking to Fig. 3 it looks like the storm-induced monoterpene coincided with low ozone, how can thus the formation of SOA by oxidation of induced monoterpenes be important.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 20631, 2011.

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