

## ***Interactive comment on “Measurement of atmospheric sesquiterpenes by proton transfer reaction-mass spectrometry (PTR-MS)” by S. Kim et al.***

### **Anonymous Referee #3**

Received and published: 23 December 2008

In general this work represents a valuable contribution to the study of sesquiterpene emissions with PTR-MS, considering that this class of BVOC represents an important sink for ozone and OH radicals in the BVOC emitting forests. It is interesting the attempt to explain the missing OH reactivity due to reactions with sesquiterpenes. For these reasons, I recommend the paper to be accepted for publication subject to minor revisions:

Pag 415 line 5-9: The atmospheric life-time of B-Cariophyllene is estimated to be 160s, and the ozone concentration to be about 20 ppb. Please provide information on how you derived these two variables. Please include also a formulation, a better descrip-

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tion or a reference on how to calculate this important reactive loss in section 2. You should mention in the text the study of Ciccioli et al. (JGR, 1999) which explained sesquiterpene reactivity by reactions with ozone.

Pag 415 lines 20-25: you mention here an interesting measurement with Eddy Covariance, but the information you provided is scarce. Even if for only two days, you should give details in section 2 or cite a reference. Together with the ratio between isoprene and MT fluxes, it would be interesting to know also the magnitude of fluxes measured in those two days and see if it is comparable with the fluxes calculated according the ILT model.

Pag. 416 lines 14-20: this is the most interesting aspect of the paper, but again you should provide more information on how you calculated the OH reactivity based on MT and SQT concentration measurements.

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Interactive comment on Atmos. Meas. Tech. Discuss., 1, 401, 2008.

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