

## ***Interactive comment on “Process-based modelling of biogenic monoterpene emissions: sensitivity to temperature and light” by G. Schurgers et al.***

**G. Schurgers et al.**

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We would like to thank the reviewer for the constructive comments. Based on these comments, we would like to address the following issues in a revised version of the manuscript:

### **Title**

The title will be adjusted, we are considering "Process-based modelling of biogenic monoterpene emissions combining production and release from storage".

### **Differentiation of monoterpenes**

The differentiation between different monoterpene types and the link to direct emission or storage is an interesting issue, and received some attention in the discussion section of the paper. We will extend this description qualitatively, it will be hard, however, to

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quantify this for application on a regional or global scale with the limited amount of observations available. For a proper quantification of this differentiation, one would ideally have long-term observations of shifts in the different monoterpene species that are emitted. The discussion of this topic will be extended.

### Seasonal variability

We agree that the seasonal variability of emissions is a recurrent problem in modelling, and that it is hard to represent this in a global model. This will be stated more clearly in a revised version of the manuscript.

### $\tau = 0$

The occurrence of a residence time of 0 will be corrected, the sentence on page 284 will be replaced by "... production algorithm (Eq. 2) for direct release (no storage) and for release from storage with time constants up to 160 days." The occurrence of  $\tau=0$  in table 3 will be removed.

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Interactive comment on Atmos. Chem. Phys. Discuss., 9, 271, 2009.

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