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*Supplement of*

## **Evaluation of OH and HO<sub>2</sub> concentrations and their budgets during photooxidation of 2-methyl-3-butene-2-ol (MBO) in the atmospheric simulation chamber SAPHIR**

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## Zero-air phase model results

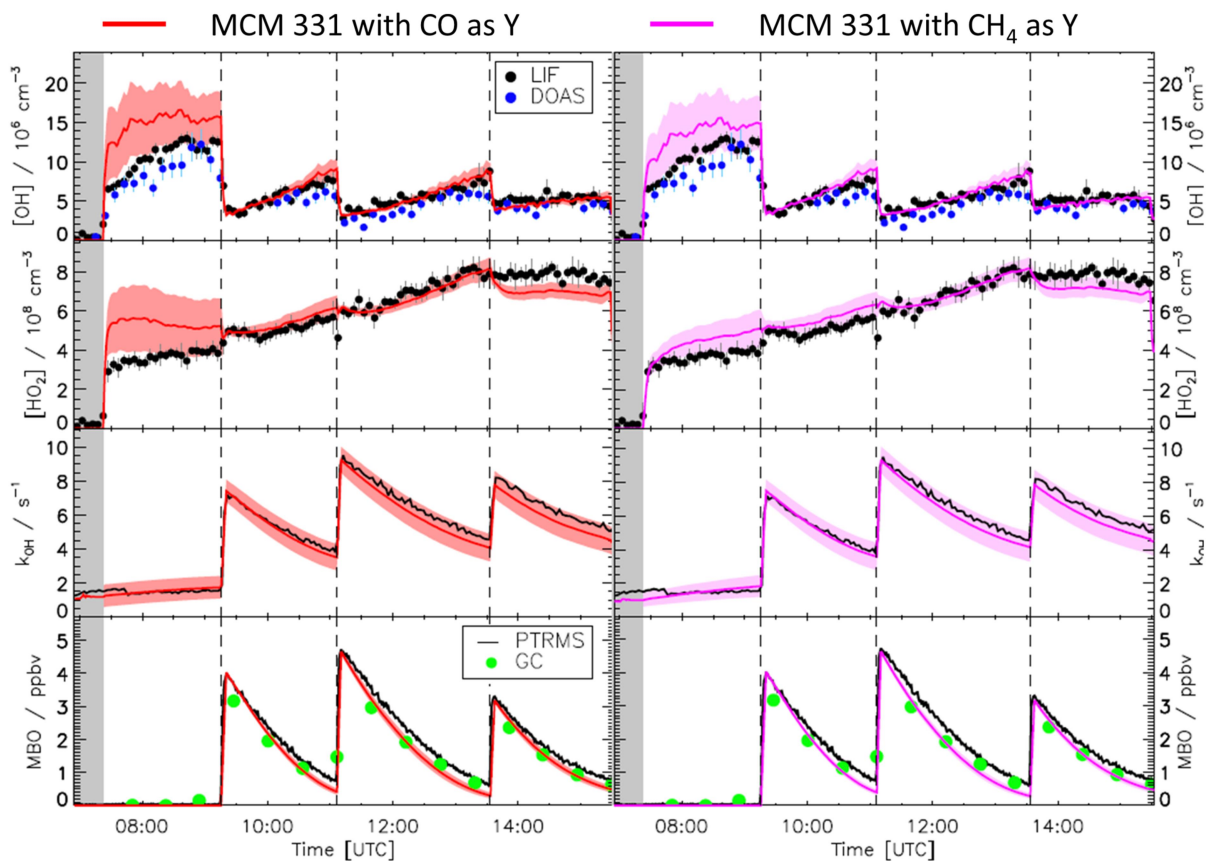


Figure S1: Measured time series of OH and HO<sub>2</sub> radical concentrations, OH reactivity and MBO concentrations compared to results obtained from modelling using the MCM version 3.3.1. On the left hand panels a hypothetical species Y that behaves like CO was introduced in the model to explain the background reactivity before addition of MBO. In the right hand panels Y is assumed to behave like CH<sub>4</sub> instead with a delayed secondary formation of HO<sub>2</sub> radicals. The red and pink shaded areas represent the uncertainty of the model caused by the uncertainties of the OH reactivity measurements (see text for details). Grey shaded areas indicate the times before opening the chamber roof and vertical dashed lines indicate the times when MBO was injected. Note that the model results after the injection of MBO do not differ significantly, i.e. the nature of the background reactivity in the chamber is secondary for the main part of the experiment. In Fig. 1 of the main manuscript the modelling results for the period before MBO injection were therefore omitted for clarity.