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Improved simulation of isoprene oxidation chemistry with the ECHAM5/MESSy chemistry-climate model: Lessons from the GABRIEL airborne field campaign: Supplementary material

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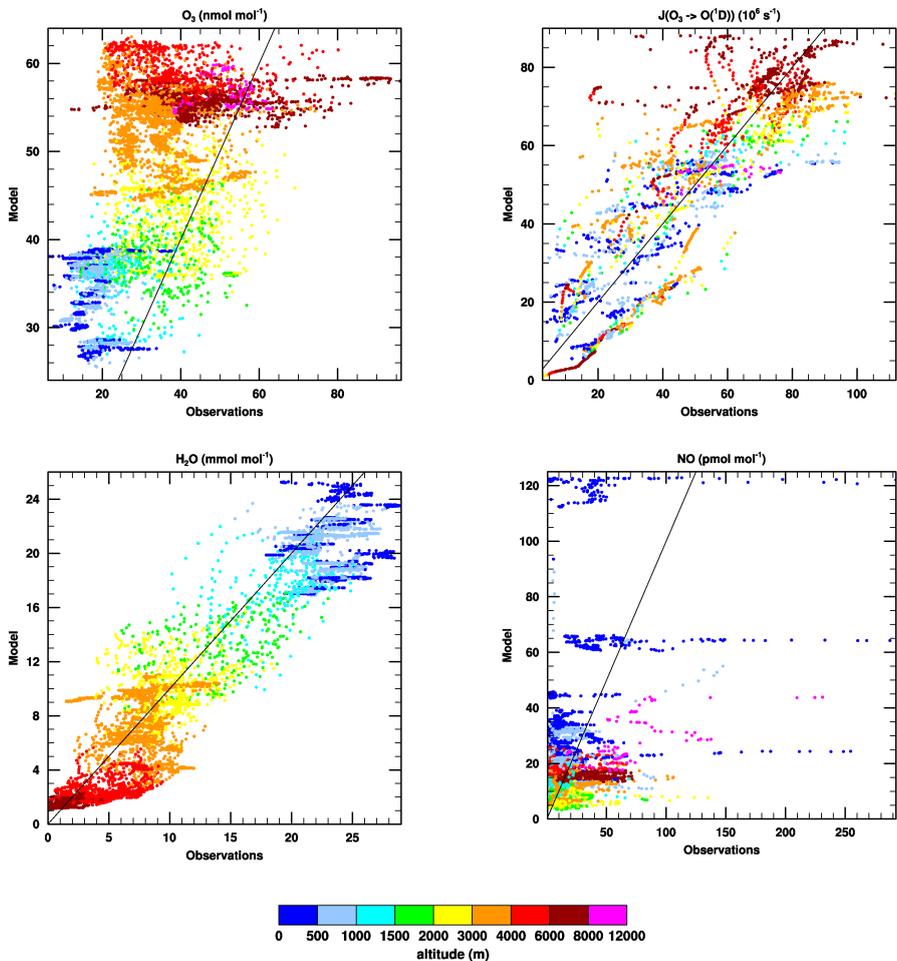


Fig. 1. Important terms in the OH budget as simulated by ECHAM5/MESSy (using the MIMvK mechanism), compared with GABRIEL measurements.

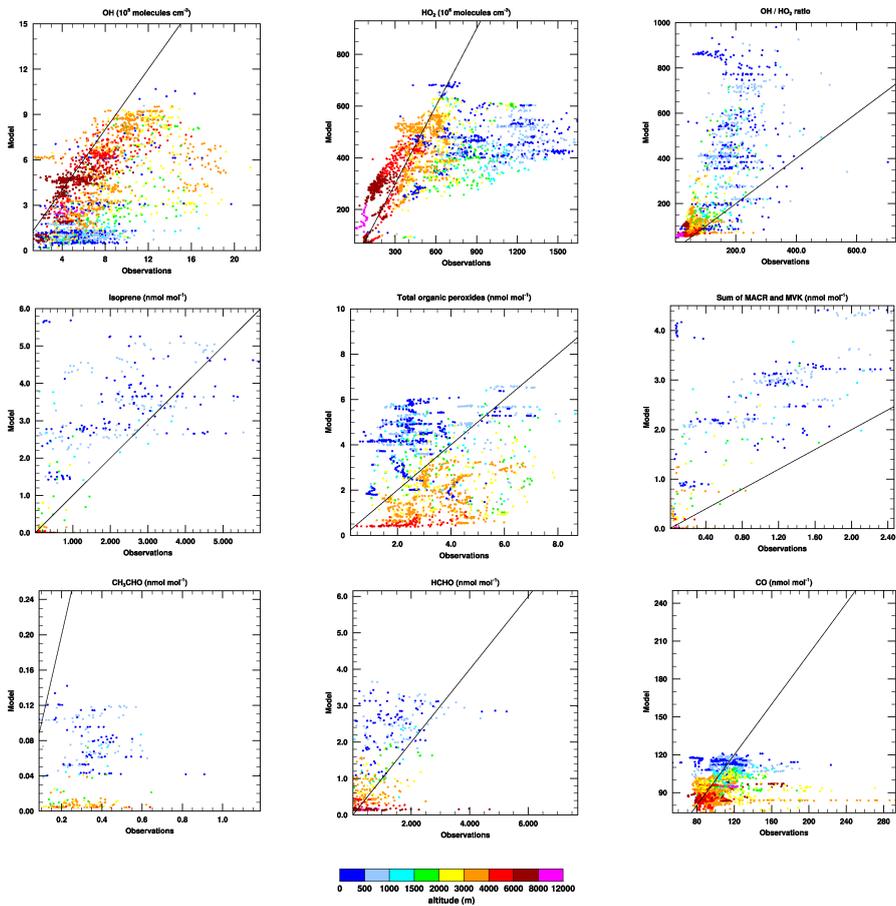


Fig. 2. Model-measurement comparison for several trace species observed during GABRIEL for the MIMvK model run

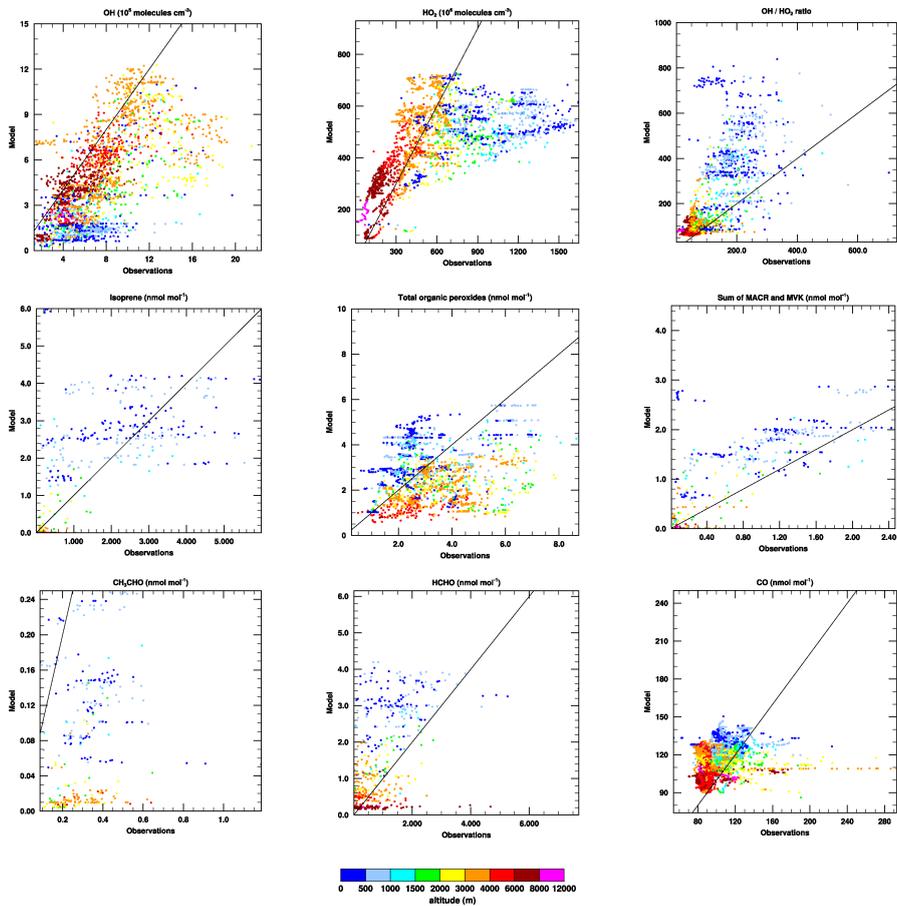


Fig. 3. Model-measurement comparison for several trace species observed during GABRIEL for the MIM2 model run

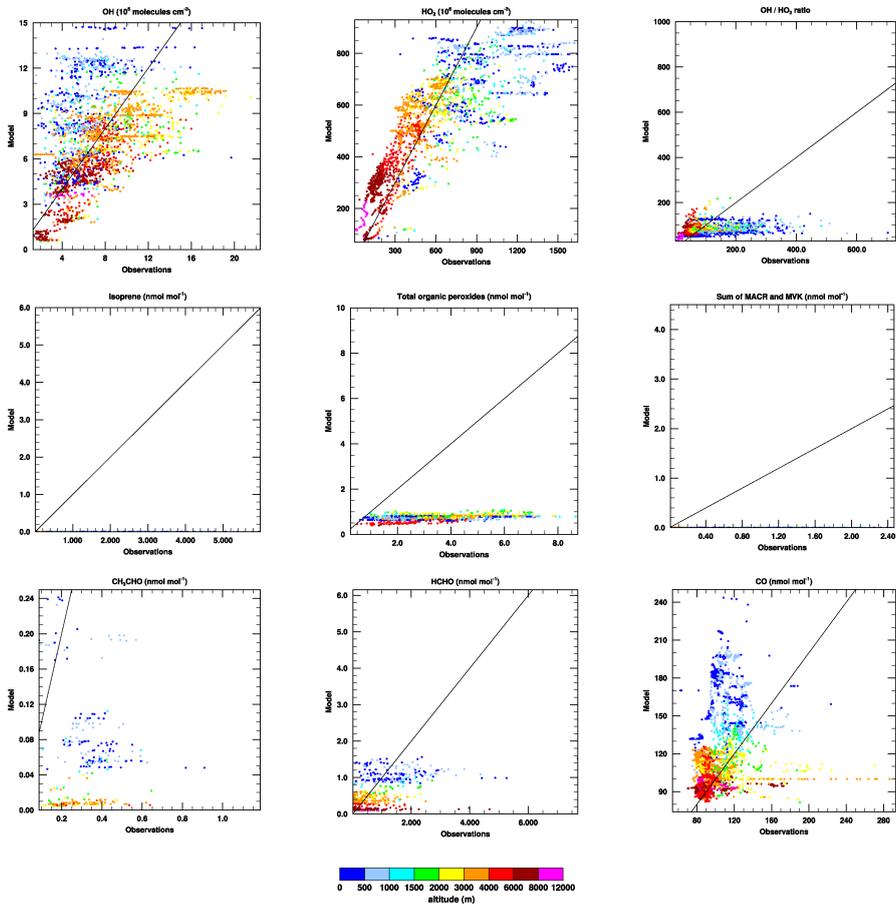


Fig. 4. Model-measurement comparison for several trace species observed during GABRIEL for the model run performed without isoprene

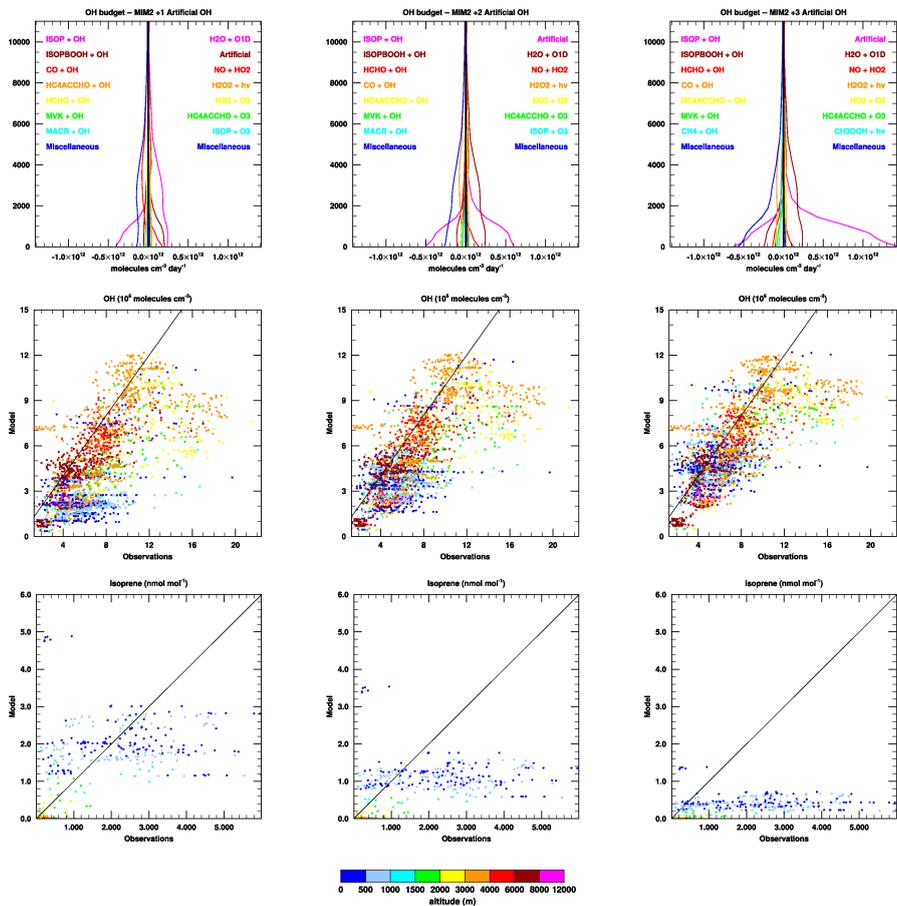


Fig. 5. Effect of progressively adding more artificial OH to the MIM2 mechanism

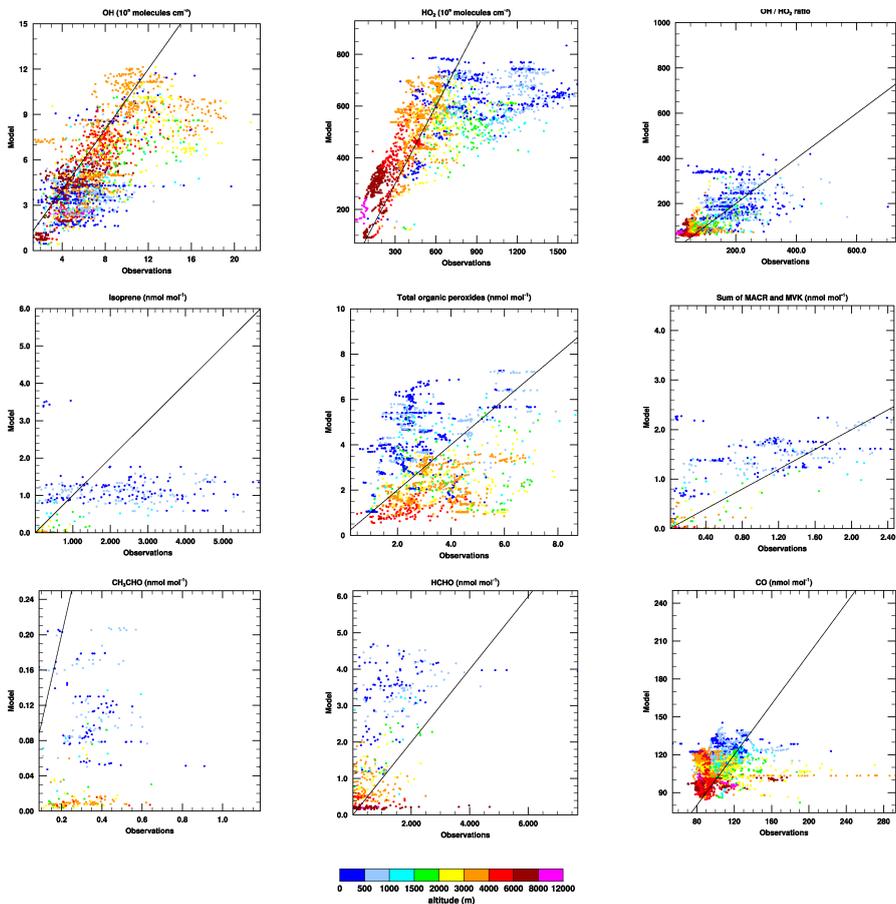


Fig. 6. Model-measurement comparison for several trace species observed during GABRIEL for the run performed with MIM2 and two artificial OH radicals produced from the reaction of HO₂ with peroxides of isoprene

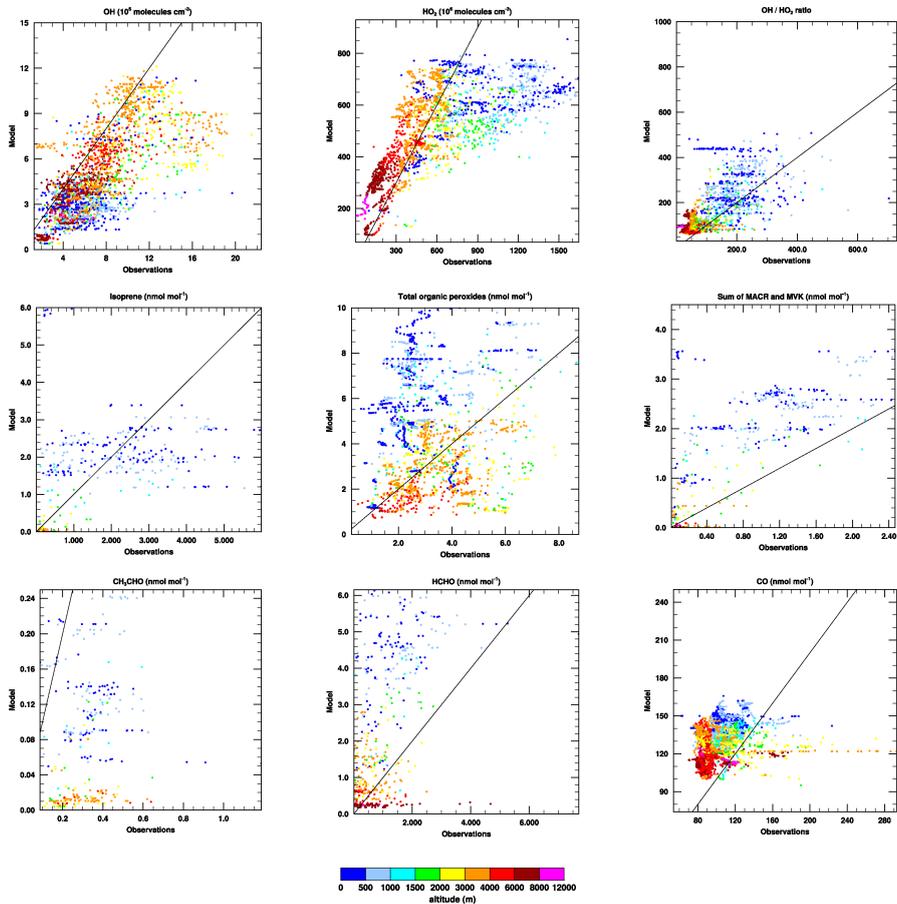


Fig. 7. Model-measurement comparison for several trace species observed during GABRIEL for the run with both artificial OH and a 50% increase in the global isoprene flux

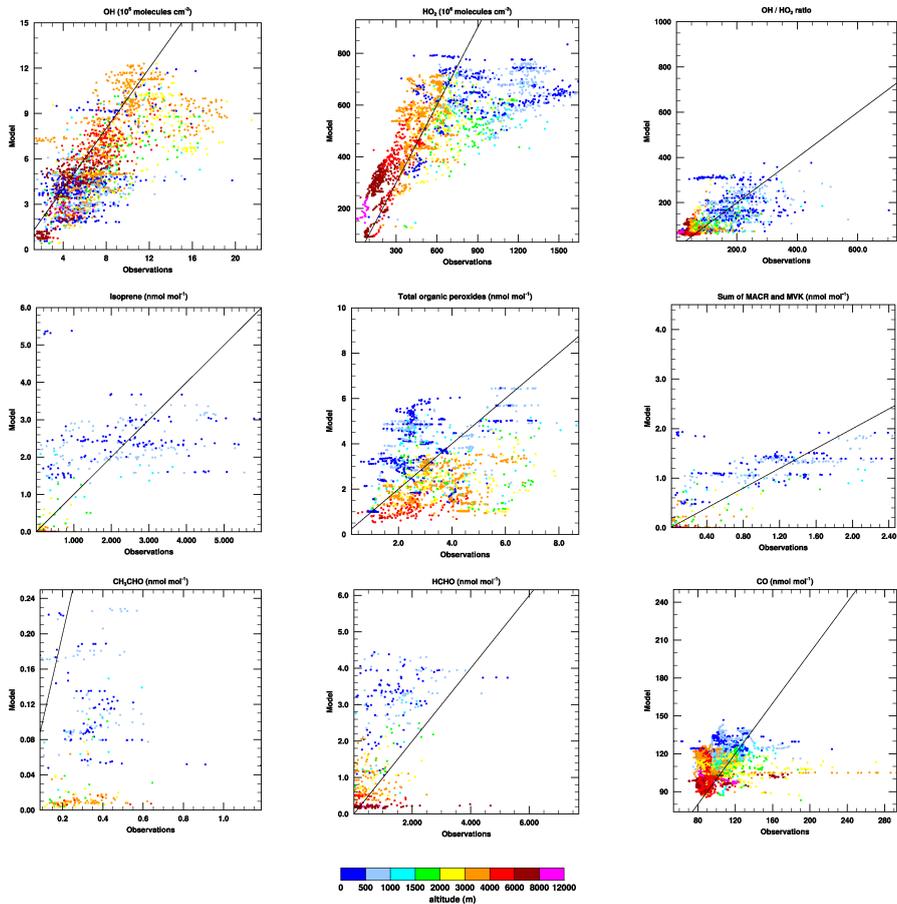


Fig. 8. Model-measurement comparison for several trace species observed during GABRIEL for the run with both artificial OH and the reduced rate constant for isoprene + OH