



Tropospheric HCHO over Africa measured with GOME (Global Ozone Monitoring Experiment) and compared with backtrajectory calculation

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Global Ozone Monitoring Experiment (GOME) measurements regularly reveal enhanced columns of formaldehyde over Africa. Formaldehyde is an important intermediate product in the photochemical destruction of methane and nonmethane volatile organic compounds. The key processes leading to these enhancements are the photochemical oxidation of formaldehyde precursors or its direct emission by biomass burning. To assess the importance of both processes (biomass burning and biogenic emissions), a joint transport and chemistry analysis of air masses was carried out. This analysis reproduces the spatial distribution of formaldehyde retrieved from GOME measurements as well as their total columns. Additionally this study reveals that with respect to formaldehyde, biogenic emissions are nearly of equivalent importance compared to emissions from biomass burning.