



Model Simulations of Formaldehyde compared with GOME Observations from 1996 to 2000

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Formaldehyde (HCHO) is one important indicator of tropospheric hydrocarbon emissions and photochemical activity. It is also directly emitted into the atmosphere through the combustion of fossil fuels, biomass burning, and industrial processes.

Here, a comparison of formaldehyde simulated from a number of atmospheric chemistry models with satellite measurements from the Global Ozone Monitoring Experiment (GOME) for the period 1996-2000 is presented. The work has been carried out within the EU project RETRO (REanalysis of the TROpospheric chemical composition over the past 40 years - <http://retro.enes.org/>). All models apply the same anthropogenic, biogenic and biomass burning emissions of ozone precursor gases. For a proper comparison with GOME, the formaldehyde fields from the different models are analysed daily at 10:30 local time, close to the overpass time of the satellite, and collocated with the measurements to account for sampling biases due to incomplete spatial and temporal coverage of the satellite instrument.

Together with correlation studies on a global scale also the seasonal and interannual variability in different regions of the world with the main focus on biogenic and biomass burning emissions has been analysed and will be presented here.