



VOC and ozone fluxes from a pine forest in the north of Belgium.

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Plants release large amounts of carbon as Volatile Organic Compounds (VOCs) into the atmosphere. These VOCs play an important role in the chemistry of the troposphere as they can be involved in the mechanisms of ozone and aerosol formation. The key mechanisms underneath biogenic VOC emissions are still not well understood, leading to large uncertainties in BVOC inventories on global and regional scales.

Measurements of VOCs, ozone and micro-meteorology are conducted at the 'De inslag', a 80-year old mixed pine-oak forest located in the Campine region near Antwerp, Belgium. The forest site is a level-II plot of the European Programme of Intensive Monitoring Forest Ecosystems and is part of the Carboeuro and Nitroeuropa-flux research network. The site is equipped with a flux tower that reaches above the 23m canopy.

A Proton Transfer Reaction Mass Spectrometer and a Fast Ozone analyser allow determining VOC and ozone fluxes by Eddy Covariance. An analytic footprint model is used to exclude non-forest fluxes. In this study, we will test the accuracy of this footprint model with anthropogenic tracers (benzene and toluene).