



Global Observations of Formaldehyde

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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.

Global HCHO observations for 1995 to 2004 from the GOME instrument on-board the ERS-2 satellite and the SCIAMACHY instrument onboard ENVISAT are presented. Selected data sets are compared to ground-based observations from the Bremian DOAS network for atmospheric measurements (BREDOM).

Correlation studies with data from other space-borne instruments (AVHRR and ATSR) emphasise recent studies, that biogenic emissions are the largest source for HCHO on a global scale. The results demonstrate the ability to measure HCHO from space, and imply that space-based measurements of HCHO provide valuable information on trends on emission fluxes of reactive hydrocarbons.