TROPOSPHERIC OZONE BASED ON SATELLITE MEASUREMENTS OF SCIAMACHY AND GOME

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The increase of pollution events caused by an accession of population leads an to extensive air quality degradation with regional and global implications. During such events high levels of trace gases like methane (CH4), carbon monoxid (CO), non methane hydrocarbons (NMHC) and nitrogen oxides (NOx= NO+NO2) can be observed. Additionally tropospheric ozone (O3) is produced by photochemical processes as well. Tropospheric O3 itself is a trace gas, which plays a controlling role in the oxidation capacity of the atmosphere.

Until recently our knowledge of the distribution of tropospheric O3 has come from ozone sondes, surface and aircraft observations only, but since the launch of satellite experiments such as GOME (Global Ozone Monitoring Experiment, 1995) and SCIAMACHY (Scanning Imaging Absorption Spectrometer for Atmospheric Chartography, 2002) their measurement data allow the globally analysis of tropospheric O3.