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# The use of GOME and SCIAMACHY data to study the impact of biomass burning pollution over Portugal in August 2003

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The Global Ozone Monitoring Experiment (GOME) launched in April 1995 is measuring the sunlight back scattered by the surface in nadir viewing mode (240-790 nm) to detect O3, NO2, BrO, OClO, HCHO and SO2. SCIAMACHY (Scanning Imaging Absorption Spectrometer for Atmospheric ChartographY) launched in March 2002 is measuring sunlight, transmitted, reflected and scattered by the earth atmosphere or surface (240 nm - 2380 nm). SCIAMACHY measurements yield the amounts and distribution of O3, BrO, OClO, ClO, SO2, H2CO, NO2, CO, CO2, CH4, H2O, N2O, p, T, aerosol, radiation, cloud cover and cloud top height in limb and nadir mode.

Over Portugal biomass burning was extensive in summer 2003. During these burning event large amounts of aerosols and trace gases like nitrogen oxide NOx, hydrocarbons, formaldehyde (HCHO) and carbon monoxide (CO) are emitted into the troposphere. In photochemical reactions tropospheric O3 is produced. GOME- and SCIAMACHY-data were analysed to observe an increasing of this trace gas during the fire event in summer 2003 and to compare then these results with the data of a “non-burning-season” to calculate the additional impact.