



Tropical tropospheric column ozone from GOME-I, SCIAMACHY and GOME-II using the Convective Cloud Differential (CCD) method

Elpida Leventidou, Mark Weber , Kai-Uwe Eichmann , and P. John Burrows

Institute of Environmental Physics, University of Bremen, Bremen, Germany (levent@iup.physik.uni-bremen.de)

Tropospheric ozone column can be retrieved with the Convective Clouds Differential (CCD) technique (Ziemke et al., 1998) using total ozone column and cloud retrievals. The CCD technique uses the clear-sky and above-cloud ozone column measurements to derive a monthly mean tropospheric column amount by the subtraction of the above cloud column from the total column. An important assumption here is that stratospheric ozone is nearly invariant with longitude, which is only approximately true in the tropical region. A CCD algorithm has been developed and is applied to GOME-I, SCIAMACHY and GOME-II measurements so that a unique long-term record of monthly averaged tropical tropospheric ozone (20°N – 20°S) can be created starting in 1995. First results of the CCD application that includes validation with SHADOZ ozonesonde data will be presented.