Geophysical Research Abstracts, Vol. 7, 08449, 2005
SRef-ID: 1607-7962/gra/EGU05-A-08449

The new University of Bremen ozone and temperature climatology and its impact on satellite total ozone retrieval

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A new ozone column classified climatology of ozone and temperature profiles has been prepared with the primary goal to be used for satellite ozone profile and total column retrieval. The new University of Bremen climatology is also attractive for applications to initialise chemistry-transport models and climate models. The use of this climatology as a-priori information was proven to improve significantly ozone profile retrieval from GOME. Profile shape information on both ozone and temperature is also important to account for the temperature dependence of ozone absorption in the total column retrieval. We present the major feature of the new ozone climatology and report on the sensitivity of a-priori profile shape information on total ozone retrieval with particular emphasis on application to GOME and SCIAMACHY satellite data. Furthermore, the impact of different ozone climatogies, that are currently available, on total ozone retrieval will be investigated.