Geophysical Research Abstracts, Vol. 7, 07234, 2005
SRef-ID: 1607-7962/gra/EGU05-A-07234

Dependence of water vapor results for MIPAS/Envisat on the spectral lines used for the retrieval

M. Milz, N. Glatthor, G.P. Stiller, T. von Clarmann,

Institut für Meteorologie und Klimaforschung, Universität Karlsruhe/Forschungszentrum Karlsruhe GmbH, Postfach 3640, D-76021 Karlsruhe, Germany (Contact: mathias.milz@imk.fzk.de)

The Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) onboard Envisat is a limb viewing mid-infrared high-resolution spectrometer. At IMK a scientific MIPAS level 2 data processor is used to derive geophysical data from the MIPAS observations, complementing the near-realtime analysis by ESA. Among numerous atmospheric parameters, water vapor profiles are retrieved from spectral data in an altitude range from the upper troposphere up to the mesosphere.

For the retrieval of water vapour small spectral ranges are selected from the broad band spectra measured by MIPAS with the aim to optimize the trade–off between measurement noise error and other error sources. The results strongly depend on the selection of spectral lines. In this paper we present a study on the dependence of the water vapour profiles on the spectral lines which are used for the retrievals.

Aim of this study is to check the consistency of the spectroscopic data for various wavenumber ranges and to find an optimal set of spectral lines for future retrievals of water vapour.