



MIPAS – 10 years of spectroscopic measurements for investigating atmospheric composition

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The Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) aboard the European satellite ENVISAT is a limb sounder measuring the thermal emission (4.15 to 14.6 μ) of atmospheric trace gases and particles with high spectral resolution. Due to the special limb viewing geometry MIPAS yields global coverage of atmospheric parameters from pole to pole every day since March 2002. The altitude range detected covers the upper troposphere, the stratosphere and the mesosphere when using the nominal measurement mode.

MIPAS data have been applied to retrieve operationally vertical profiles of the temperature and the six key species H₂O, O₃, CH₄, N₂O, HNO₃ and NO₂. In addition a large number of other parameters have been derived with none-operational research algorithms (H. Fischer et al. 2008). Many scientific results have already been published in peer-reviewed journals. In this talk only a selection of more recent result will be presented including the “ozone hole” in the Arctic 2010/2011, tropical dehydration processes and the temporal evolution of age of stratospheric air in the last decade.