



Carbon monoxide measurements from MIPAS on Envisat

B. Funke (1) for the MIPAS team

Instituto de Astrofísica de Andalucía (CSIC), Granada, Spain

Due to its long chemical lifetime and variable volume mixing ratio in the middle atmosphere, carbon monoxide serves as an excellent tracer for stratospheric and mesospheric dynamics. In the lower atmosphere, CO measurements allow for the characterization of emission sources and upper tropospheric / lower stratospheric (UTLS) exchange processes. Spectrally resolved non-LTE emissions of CO are measured by the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) aboard the environmental satellite Envisat. Vertical profiles of CO volume mixing ratio are retrieved from 6 to 70 km with the scientific IMK/IAA data processor under consideration of non-LTE. In this paper we present a new data version (V7.0) with enhanced vertical resolution and an improved treatment of non-LTE emissions. We report on recent validation activities, and highlight scientific results related to the UTLS region and to the stratosphere / mesosphere.