Geophysical Research Abstracts, Vol. 8, 08467, 2006
SRef-ID: 1607-7962/gra/EGU06-A-08467

Global climatology of ozone on Mars from SPICAM/MEX UV data and comparison with water vapor SPICAM measurements.

S. Perrier (1), J.L. Bertaux (1), F. Lefevre (1), S. Lebonnois (2), O.Korablev (3), A.Fedorova (3), F. Montmessin (1)

(1) Service d'Aéronomie du CNRS/IPSL, Verrières-le-Buisson, France, (2) Laboratoire de Météorologie Dynamique, Paris, France, (3) Space Research Institute, Moscow, Russia

The european mission Mars Express arrived at Mars in January 2004, during Mars's late northern winter. On board, the dual UV/IR spectrometer SPICAM is dedicated to monitor the martian atmosphere, and has recorded spectra for one entire martian year, from January 2004 (orbit number 8, L_s=331°) to December 2005 (orbit number 2384, L_s=328°), at every range of latitudes and longitudes. The analysis of the complete dataset is presented. It is the first time that such a global climatology of ozone on Mars is retrieved with a global spatial and temporal coverage. We discuss the comparison with predictions from Global Circulation Model. SPICAM UV/IR is the first instrument able to measure simultaneously the vertical column density of ozone in the UV and O_2 emission in the IR, which is an indirect way to probe ozone above 20 km. The comparison between the two datasets will be presented, yielding a global experimental correlation between H_2O and ozone distributions.