Geophysical Research Abstracts, Vol. 8, 06324, 2006
SRef-ID: 1607-7962/gra/EGU06-A-06324

Multi-technique comparison of MIPAS O3 measurements with correlative data obtained by FIR-FTS measurements during the ENVISAT stratospheric aircraft and balloon campaigns (ESABC)

G. Redaelli (1), U. Cortesi (2), G. Bianchini (2), E. Castelli (3), B. M. Dinelli (3), B. Grassi (1), F. Mencaraglia (2), A. Taddei (1), G. Visconti (1)

(1) Department of Physics, University of L'Aquila, Coppito - L'Aquila, 67010, Italy (e-mail: gianluca.redaelli@aquila.infn.it / fax: +39-0862-433033), (2) Istituto di Fisica Applicata "Nello Carrara" del Consiglio Nazionale delle Ricerche, Firenze, Italy, (3)Istituto di Scienze della Atmosfera e del Clima del Consiglio Nazionale delle Ricerche, Bologna, Italy

In the frame of ESA ESABC (ENVISAT Stratospheric Aircraft and Balloon Campaigns) activities in 2002-2003, two Fourier transform Far-Infrared limb sounders - namely, IBEX (Infrared Balloon Experiment) and SAFIRE-A (Spectroscopy of the Atmosphere by using Far Infrared Emission - Airborne) - were deployed in mid and high latitude flights, aiming at the validation of MIPAS L2 products for Ozone and other target species. For Ozone, in particular, a thorough comparison was performed by using traditional correlative analyses (comparing O3 mixing ratio profiles collocated within a chosen spatial-temporal vicinity), trajectory matching technique, quasi-conservative coordinate analyses and chemical assimilation in a Chemical Transport Model. We report details of the adopted validation strategy and show how complementary information derived from different validation techniques and tools contributed to the quality assessment of MIPAS O3 data retrieved from observations during the instrument full spectral resolution mission.