AIRBORNE MICROWAVE OBSERVATIONS DURING SCIAMACHY VALIDATION CAMPAIGNS: FIRST RESULTS

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The Airborne Submillimeter wave Radiometer ASUR is a passive microwave sensor designed to be operated on board an aircraft. By flying above the tropopause absorption by water vapor can be avoided. Stratospheric vertical profiles of many trace gases like O3, N2O, H2O, ClO, HNO3, NO and BrO can be derived from the pressure broadened molecular line spectra received between 604 and 662 GHz.

ASUR takes part in the German validation campaigns SCIA VALUE on board the FALCON aircraft in September 2002 and February/March 2003. Both campaigns span from arctic latitudes to the equator in order to cover a wide range of different atmospheric conditions. Most of the flights are arranged to meet in time as many SCIAMACHY ground pixel as possible along the footprints of the ENVISAT satellite orbits. Synergies with other instruments on ground and on balloons are intended. The OLEX lidar and the AMAXDOAS UV/VIS sensor complete the FALCON payload.

In the summer 2002 campaign during the underflights the measurements were focused on O3 and N2O. Results of the first profile retrievals will be shown. An attempt to compare with preliminary SCIAMACHY limb profiles will be made.