

# **Calibration of the airborne CRISTA-NF infrared limb sounding instrument**

S.E. Schroeder (1), A. Kullmann (1), P. Preusse (1), M. Ern (1), F. Stroh (1), F. Olschewski (2), P. Knieling (2), M. Riese (1)

(1) ICG-I, Forschungszentrum Juelich (2) Department of Physics, Wuppertal University

The CRYogenic Infrared Spectrometers and Telescopes for the Atmosphere – New Frontiers (CRISTA-NF) instrument is the airborne version of the CRISTA satellite infrared limb sounder. It was operated successfully on the GEOPHYSIKA research aircraft during a test campaign in July 2005 and during the SCOUT-O3 Tropical Aircraft Campaign in November/December 2005. Radiance calibrations became more complex in comparison to the satellite instrument because the vacuum shell of CRISTA-NF is now confined by a Zn:Se window and because the detectors are drifting thermally. By comprehensive radiance calibrations with a blackbody source the window's emissivity and transparency are determined and the dependence of the instrument sensitivity on the detector temperature is characterized.