



## **Water vapour differential absorption lidar measurements at Hornisgrinde during COPS**

**A. Behrendt**, V. Wulfmeyer, M. Schiller, A. Riede, H. Bauer, G. Wagner, S. Pal

Universität Hohenheim, Institut für Physik und Meteorologie, Stuttgart, Deutschland  
(behrendt@uni-hohenheim.de)

Differential absorption lidar (DIAL) allows to profile the atmospheric water vapour number density with higher resolution and accuracy than any other remote sensing technique. Within three inter-linked projects of Deutsche Forschungsgemeinschaft coordinated by University of Hohenheim a scanning water vapour DIAL has been developed which yields presently the largest power-aperture product of such systems. The platform development was managed by the Institute of Tropospheric Research, Leipzig, a high-power pump laser was developed by University of Potsdam, the frequency-converter, a Titanium Sapphire laser, was built by University of Hohenheim, and the seeders to stabilize the transmitter were set up by Deutsches Zentrum für Luft- und Raumfahrt Oberpfaffenhofen.

In this contribution, we present and discuss the measurements which were made with the system during COPS (Convective and Orographically-Induced Precipitation Study, see contribution of V. Wulfmeyer et al. to this conference) from June to August 2007 on top of Hornisgrinde, the highest peak in the Northern Black Forest, at an elevation of 1161 m above sea level.