

# **Geophysical validation of NO<sub>2</sub> profiles from SCIAMACHY lunar occultation measurements**

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Vertical profiles of stratospheric NO<sub>2</sub> have been retrieved from lunar transmission spectra measured by Scanning Imaging Absorption Spectrometer for Atmospheric Chartography (SCIAMACHY). These measurements were taken over the high Southern latitude of 60-90 degrees during the period of March to June 2003 and January to June 2004.

To assess the accuracy of the retrieved NO<sub>2</sub> profiles, the SCIAMACHY nighttime NO<sub>2</sub> profiles were compared with daytime NO<sub>2</sub> profiles measured by Halogen Occultation Experiment (HALOE), Polar Ozone and Aerosol Measurement (POAM-III), and the Stratospheric Aerosol and Gas Experiment (SAGE-II) using photo chemical correction model. The outcome of these validations are presented in this paper.