Geophysical Research Abstracts, Vol. 7, 03226, 2005
SRef-ID: 1607-7962/gra/EGU05-A-03226

Validation of the self-consistency of the GOMOS NO3, NO2 and O3 data using chemical data assimilation

M. Marchand (1), S. Bekki (1) and A. Hauchecorne (1)
(1) Service d'Aéronomie IPSL/CNRS

The NO3 measurements by the GOMOS instrument on board the ENVISAT platform are the first satellite measurements of this species. The simultaneous measurements of O3 and NO2 are strongly coupled chemically to NO3 at night. This property of the chemical system O3, NO2 and NO3 is used to validate the self consistency of the GOMOS measurements of the different species. Most of the chemical reactions involved in the coupling has strongly temperature dependant. We used this property to attempt to derive local temperature from the corresponding simultaneous measurements of NO3 and O3 by GOMOS.