

Interactive
Comment

Interactive comment on “Global and long-term comparison of SCIAMACHY limb ozone profiles with correlative satellite data (2002–2008)” by S. Mieruch et al.

S. Mieruch et al.

weber@uni-bremen.de

Received and published: 2 January 2012

Reviewer #1: The section on data processing describes that in some cases original data from other instruments are not available in the needed number densities as retrieved by the SCIAMACHY-instrument. For this conversion auxiliary data (temperature, pressure, height) have to be included. Since these data also include errors, additional errors are introduced into the transformed ozone data. How large are these errors?

We have not accounted for this error and we believe this is beyond the scope of this paper. The p,T error is not only affecting the number density conversion, but the satellite

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



retrieval as well.

Reviewer #1: Figures 2 and 3 reveal larger discrepancies of the SCIAMACHY data below 20 km, with a core area in the tropics. However, this is extended to 30-40degrees outside the tropics, especially into the N.H. Since the lower stratosphere and these latitudinal belts are very important for the ozone budget, the text and the quotation on page 4880 (repeated in the second para of the summary) is very poor.

We state that the large error in the lowermost tropical stratosphere is most likely related to cloud effects. This is also true at lower middle latitudes where clouds altitudes are lower. Only at higher latitudes this effect is not as strongly evident most likely due to the lower SZA in the satellite observations by SCIAMACHY.

Interactive comment on Atmos. Meas. Tech. Discuss., 4, 4867, 2011.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

