

Interactive  
Comment

## ***Interactive comment on “SO<sub>2</sub> Retrieval from SCIAMACHY using the Weighting Function DOAS (WFDOAS) Technique: comparison with Standard DOAS retrieval” by C. Lee et al.***

**K. Yang**

kyang@umbc.edu

Received and published: 16 June 2008

This WFDOAS method with an improved correction of Ring effect represents a significant advance over the SDOAS retrievals of sulfur dioxide. Though I am puzzled at the authors' choice to fit the SO<sub>2</sub> cross section, instead of the SO<sub>2</sub> weighting function, which could be calculated simultaneously as the ozone weighting function without much additional cost. However, this choice is not expected to affect the main finding of this paper, i.e., improved Ring correction reduces the bias in SO<sub>2</sub> retrievals in background (i.e., minimal SO<sub>2</sub> loadings) areas.

Figures showing the comparison between the spectral residuals of WFDOAS with sin-

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



gle Ring spectrum and ORSC and the difference in the two Ring corrections would be helpful for readers to understand the main factors contributed to the reduction of SO<sub>2</sub> offset. In other words, section 3.1 of this paper could be expanded to include more detailed explanation by showing some results from intermediate steps.

Figures 2 and 3 seem to show that in the background area there is no significant difference in the standard deviation between the results of WFDAS and SDOAS, i.e., the offsets are different but the noises are essentially the same for both methods. Could the authors comment on the intrinsic measurement noise of SCIAMACHY, and whether the SO<sub>2</sub> noise can be explained by the radiance measurement noise?

---

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 10817, 2008.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

