

Interactive comment on “Improved stratospheric aerosol extinction profiles from SCIAMACHY: validation and sample results” by C. von Savigny et al.

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Interactive comment:

Is it possible to relate the aerosol optical depth data related here to total particle concentrations present at altitudes in the stratosphere?

Reply:

The stratospheric aerosol optical depth cannot really be converted to particle concentration at different altitudes in the stratosphere. In principle the retrieved extinction values can be used – together with the assumed size parameters – to calculate particle

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concentrations as a function of altitude, but concentration is then strongly affected by the assumed aerosol size parameters. Therefore, the determination of particle concentration is not worthwhile at the present stage. In the future, particle size information will be retrieved from multi-wavelength extinction profile retrievals and then the estimation of absolute particle concentrations will become possible.

Interactive comment on Atmos. Meas. Tech. Discuss., 8, 8353, 2015.

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8, C4027–C4028, 2015

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