



Particle size distribution of the stratospheric aerosol from SCIAMACHY limb measurements

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Stratospheric aerosols are of a great scientific interest because of their crucial role in the Earth's radiative budget as well as their contribution to chemical processes resulting in ozone depletion. While the permanent aerosol background in the stratosphere is determined by the tropical injection of SO₂, COS and sulphate particles from the troposphere, major perturbations of the stratospheric aerosol layer result from an uplift of SO₂ after strong volcanic eruptions. Satellite measurements in the visible spectral range represent one of the most important sources of information about the vertical distribution of the stratospheric aerosol on the global scale. This study employs measurements of the scattered solar light performed in the limb viewing geometry from the space borne spectrometer SCIAMACHY, which operated onboard the ENVISAT satellite, from August 2002 to April 2012. A retrieval approach to obtain parameters of the stratospheric aerosol particle size distribution will be reported along with the sensitivity studies and first results.