



- Aerosol optical properties in the UV, its influence on radiation and health-risk effects

E. Putz (1), S. Gonzi (1), P. Weihs (2), S. Simic (2), W. Laube (2), M. Blumthaler (3), A. Kreuter
Schmalwieser (4)

Affiliation(s) and Contact

(1) Institute of Physics, Dept. for Geophysics, Astrophysics and Meteorology, Karl Franzens University
(2) Institute of Meteorology, University of Applied Life Sciences and Natural Resources (BOKU-M)
Division for Biomedical Physics, Medical University of Innsbruck; (4) Division for Medical Physics
statistics, Veterinary University of Vienna

Text of Abstract

- A lot of research is currently undertaken to obtain a better understanding of aerosols in the atmosphere and their influence on radiation and climate. The term "climate" is commonly referred to as long-term behaviour, however aerosols are strongly variable in time and space and often exhibit a local short-term impact as well. It is recognized that not only ozone and clouds strongly influence UV radiation but also aerosols as well. In recent years satellite UV retrievals became more and more important due to their global coverage. However, UV retrievals from space are hampered by the fact that separating contributions from the atmosphere and aerosol effects are difficult and rely on model assumptions. It is therefore of great importance to validate satellite based UV retrievals by ground based measurements. A site campaign in Austria has been carried out in May and June of 2007 in the area of Vienna. The campaign was covered by a number of radiation measurement devices. Additionally a Cimel type sun-photometer was operated to obtain aerosol optical properties. We show in the poster model studies by means of radiative transfer codes including column integrated aerosol optical properties. The model results are compared to ground-based UV measurements and to OMI satellite retrievals.