

FIELD, LABORATORY AND MODELLING STUDIES OF TROPOSPHERIC AEROSOL AND CLOUD CHEMISTRY

B. Ervens, J. Hesper, C. Neusüß and H. Herrmann

Institut für Troposphärenforschung, Permoserstr. 15, 04318 Leipzig

Tropospheric multiphase chemistry is studied in field measurements, laboratory and modelling studies. Examples from recent aerosol and cloud characterisation field experiments will be presented.

Laboratory studies are described which are performed to gain better insight into chemical conversions in clouds and the wet tropospheric aerosol. Examples are presented for OH-forming reactions, and recent results on NO₃ reactions. Classes of reactions are discriminated and reactivity correlations are outlined. The use of such correlations for extending chemical multiphase mechanism schemes for tropospheric chemistry will be discussed.

Studies on primary kinetic salt effects observed in radical reactions will be reported and approaches to treat aerosol chemistry will be discussed.

Model development for tropospheric chemistry will be shortly reviewed and recent results on the aqueous phase chemistry scheme CAPRAM2.4 in its extended as well as in a recent condensed version will be described.

Finally, an outlook on upcoming research needs in tropospheric multiphase chemistry will be given.

Submittal Information:

- 1.) Name of Meeting: EGS annual meeting
- 2.) First Submission
- 3.) Title: FIELD, LABORATORY AND MODELLING STUDIES OF TROPOSPHERIC AEROSOL AND CLOUD CHEMISTRY
- 4.) Authors: ERVENS, B.; HESPER, J., NEUSÜß, C. AND HERRMANN, H.;
- 5.) Title of Session: OA28-Tropospheric Aerosols: Formation and Heterogeneous Chemistry
- 6.) Name of Convener: C. George, CRNS, Strasbourg, F
Co-Convener: M. Ammann, PSI, Villingen, Ch, Th. Hoffmann, ISAS, Dortmund, D
- 7.) Special equipment: none
- 8.) ---
- 9.) Preference: oral (invited)
- 10.) WinWord7.0 attached
- 11.) Contact Author
Prof. Dr. H. Herrmann
Institut für Troposphärenforschung
D-04303 Leipzig
Germany
Phone: +49 341 235 2846
Fax: +49 341 235 2325
e-mail: herrmann@tropos.de