



Comparison of mineral dust and droplet residuals measured with two single particle aerosol mass spectrometers

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Single Particle mass spectrometers are used to gain information on the chemical composition of individual aerosol particles, aerosol mixing state, and other valuable aerosol characteristics. During the Mass Spectrometry Intercomparison at the Fifth Ice Nucleation (FIN-01) Workshop, the new LAAPTOF single particle aerosol mass spectrometer (AeroMegt GmbH) was conducting simultaneous measurements together with the PALMS (Particle Analysis by Laser Mass Spectrometry) instrument. The aerosol particles were sampled from the AIDA chamber during ice cloud expansion experiments. Samples of mineral dust and ice droplet residuals were measured simultaneously. In this work, three expansion experiments are chosen for a comparison between the two mass spectrometers. A fuzzy clustering routine is used to group the spectra. Cluster centers describing the ensemble of particles are compared. First results show that while differences in the peak heights are likely due to the use of an amplifier in PALMS, cluster centers are comparable.