

1.2 Abstract

Differential mobility analyzers are the most commonly used tools in the area of aerosol science since 1950. Their function is based on the electrical mobility analysis method. The scope of this thesis was the calibration and evaluation of a modified Yale/ Vienna differential mobility analyzer and the subsequent measurement of the size distribution function of ferrite aerosols. The main conclusions were that the tested DMA gives adequate results as far as the aerosol size is concerned, but not reliable results for the concentration of the aerosol particles. Therefore, correction functions must be developed in order to produce valid size distribution measurements with the DMA in question.