Abstract

This bachelor thesis deals with the basic processing of measured light extinction data, which was measured at seven wavelengths using the aethalometer (AE-31, Magee). Since 2012, the device has been located at the Košetice meteorological station in the Czech Republic, where the measurement has been ongoing and is currently continuing. The measured data from 2013 to 2015 were processed to provide a basis for further research in meteorology and climatology. Basic parameters such as extinction coefficient and other derived characteristics (Angstroem absorption coefficient, Delta-C) are calculated. From the final data the total average values and time dependencies are determined as daily, weekly and yearly cycles. All dependencies are graphically visualized and commented on. During the data processing, it was also found that during period 2013 – 2015 there was a decrease in the average of the concentration of black carbon and that it was the highest in the winter months.

Keywords: atmospheric aerosol, light extinction, time series evaluation