

## Abstrakt (EN)

This Diploma Thesis is concerned with statistical analysis of coarse aerosol at the area of the capital city Prague with focus on its time and space variability. The data covers time period from year 2005 up to year 2010 included. The concentrations of coarse aerosol were originally calculated from recorded values of PM<sub>10</sub> and PM<sub>2,5</sub>. The assessment used in this thesis is based on concentrations of coarse aerosol recorded on four pollutant stations which are localized in the capital city. Three out of four those air pollution monitoring stations are characterized as traffic stations kind of source, where we can assume the traffic's impact over the coarse aerosol concentration. The last station is distinguished to be background to report the data of region less loaded by pollution. The analysis is executed within particular parameters supposing that main source of coarse aerosol is traffic in urban environment. For time period examination variability the year, season, week and day running was carried out. The spatial variability was researched by the air pollution monitoring stations localization. To determine a rate of dependency among particular parameters the correlation analysis according to Spearman was used within the calculation of correlation coefficients. Beside the analysis this thesis contains the comparison of aerosol's recorded data among stations of different kinds and of course trends for different parameters are observed with a short comparison to the literature description. During the thesis's development it was set that data used for statistical analysis do not have the normal distribution, that is why the hypothesis testing is executed upon using nonparametric statistic tests.