Abstract

This thesis deals with determination of seismic magnitudes of West-Bohemian earthquakes. The first part summarizes basic information from the field of seismology and also about the earthquake swarms in the area of interest. The second part deals with calibration of magnitudes, i.e. determination of coefficient that corrects for attenuation and station corrections. Seismic data from the WEBNET network from 2012 were used to this purpose. In order to suppress tradeoff among the studied parameters the data were filtered and also usage of a fixed hypocenter depth was tested. The results show that the optimum attenuation correction is smaller than that used so far magnitude determination. It turns out that a deeper analysis is needed in order to find an optimum formula for magnitude determination at the West-Bohemia WEBNET network.