

The master's thesis consists of two parts. The first part contains the azimuth -- slowness analysis for period $3s \leq T \leq 6s$, which was conducted by the FK analysis for 10 stations of the WEBNET network. In the second part there is the surface wave group velocity measurement for every station pair of 10 WEBNET stations. The interstation group velocity was obtained by the cross--correlation of microseismic noise records. Local group velocities are connected with the instantaneous period data. The Love wave group velocities are visualised by the 2D tomography calculation. The thesis also contains the additional Love waves dispersion analysis for just one station pair.