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Seismic noise measurements in the south of Upper Rhine Graben. Fundamentals frequencies and interpretation.

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The Upper Rhine Graben is considered, today, as a seismically moderate region though a lot of industries are implanted in this region. Therefore, an European project Interreg III, called: “Seismic Microzonation of the South of the Upper Rhine Graben”, was developped. The final purpose is to calculate predictive maps of soil’s acceleration.

For the region of St-Louis (in France, near Bâle) approximately 200 seismic noise measurements of a dense mesh (1kmX1km) were performed. Their location is also in accordance with geology and geotechnical measurements’s location.

The data were processed using the Nakamura’s method and one (or more) fundamental(s) frequency(ies) are determined. Then, the contour maps produced is compare with geotechnical’s results.

In the future, we expect calculate corresponding amplitudes, and, finally, we expect model (in 3dimesions) strong motions of soil in this region.