

data to understand distribution of the epicentres and causes of the seismicity. A new insight in the tectonic structure of the area is brought by the digital model of the relief DMR2. This model was created on the basis of topographic map in the 100 × 100 m dense network of the points. Its advantage is to enhance visually tectonic lines separating blocks with different level of the altitude or playing other important role in morphology of the landscape. A sketch showing these lines on scale 1:200,000 for the area of interest has been compiled. Some of these lines of fault character exhibit a close correspondence to the course of the important gravity boundaries and geologically proved faults. In contrast with the tectonic interpretation of the river system made by Č. Nekovařík, faults which do not significantly contribute to the morphology of the relief are not presented here. The NNE-SSW line on which the earthquake epicentres are concentrated cannot be distinctly observed neither in this projection nor in gravimetric maps. This line strikes somewhat diagonally to older structures delimiting the Cheb Basin, and is the most remarkable feature in the Tertiary filling of this basin. The fact that this line is not reflected either in morphology or in gravity and on the other hand that it is followed

by a river course, implies that changes in the river system are more sensitive to tectonic movements of a low amplitude. As known from other regions, even an insignificant change in the altitude of different blocks can cause instantaneous change in the drainage pattern during inundations. The movements reflected by this change could have taken place during the Quaternary denudation of the soft sediments of the Cheb Basin.

Gravimetric maps indicate that the Smrčiny granitoid massif reaches a lower depth compared to the Karlovy Vary Massif. Rather pronounced positive anomaly, which is unique in the Czech part of the Krušné hory Mts., extends in-between the two from the north. There is an unusually steep gradient zone between this positive anomaly and the negative anomaly of the Smrčiny Massif. This zone follows the boundary between the Smrčiny Massif and the Oloví unit, the western limit of the Cheb Basin and also the boundary of tectonic blocks with different altitude.

Majority of the earthquake epicentres are located in the region of the positive gravimetric anomaly between the two granitoid massifs. Large part of these is concentrated along the NNE-SSW line of possibly younger origin as discussed above.

Interpretation of the Fault Network of the Western Bohemian Region Based on the Digital Model of the Relief DMR2 and Gravimetric Maps

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Western Bohemia and the adjacent area of SE Saxony and NE Bavaria represent a region with enhanced seismicity in the form of reoccurring earthquake swarms. Interdisciplinary studies carried out in this region aim at linking geological and geophysical data to understand distribution of the epicentres and causes of the seismicity. A new insight in the tectonic structure of the area is brought by the digital model of the relief DMR2. This model was created on the basis of topographic map in the 100 × 100 m dense network of the points. Its advantage is to enhance visually tectonic lines separating blocks with different level of the altitude or playing other important role in morphology of the landscape. A sketch showing these lines on scale 1:200,000 for the area of interest has been compiled. Some of these lines of fault character exhibit a close correspondence to the course of the important gravity boundaries and geologically proved faults. In contrast with the tectonic interpretation of the river system made by Č. Nekovařík, faults which do not significantly contribute to the morphology of the relief are not presented here. The NNE-SSW line on which the earthquake epicentres are concentrated cannot be distinctly observed neither in this projection nor in gravimetric maps. This line strikes somewhat diagonally to older structures delimiting the Cheb Basin, and is the most remarkable feature in

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