



Geodynamic Pattern of the West Bohemia Area Based on Permanent GPS Measurements

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The GPS satellite signal monitoring performed on four permanent observatories (KYNS, LUBY, MARJ, POUS) in the West Bohemia region in the last four years allowed horizontal and vertical movement trends among regional geological structures to be detected and assessed quantitatively. The results can be summarized in the following way: (a) dextral movements of 1 mm/year along the Mariánské Lázně fault system, (b) regional extensions round 1 mm/year between the Krušné hory and the Smrčiny Mts, especially in the Cheb Basin area, (c) shortening trends up to 2 mm/year in the SW-NE direction in the Šumava Mts area, and (d) relative subsiding trends of 2 mm/year in the western part of the Cheb Basin and the Smrčiny Mts. to remaining part of the area under study. The discussion of an existence of these trends with respect to recent earthquake swarm occurrences of the West Bohemia region will be discussed. The research was funded by the Program AS CR for the Support of the Targeted R&D (Project No. 1QS300460551), the Czech Science Foundation (Project No. 205/05/2287) and the MEYS research programme (Projects LC506 and 1P05ME781).