Geophysical Research Abstracts, Vol. 10, EGU2008-A-07801, 2008 SRef-ID: 1607-7962/gra/EGU2008-A-07801 EGU General Assembly 2008 © Author(s) 2008



Recent Tectonic Movements in the NE Part of the Bohemian Massif, Czech Republic, Indicated by the Brittle Tectonic Approach

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The brittle tectonic analysis was applied to investigate tectonic movements on reactivated Variscan faults of the NE part of the Bohemian Massif where significant fault structure, the Sudetic Marginal Fault (SMF) is located. Field geological research started near Vápenná village, the Rychlebské hory Mts., where SMF separates Devonian crystalline limestones of the Branná group and the Paleozoic Žulová granite pluton. Several hundreds of joints and small-scale faults were inspected in three limestone quarries on the west side and a few small granite quarries on the east side of the SMF fault. High attention was aimed to presence of kinematic indicators that allowed the last movements and their trends along reactivated faults of the E-W (in the limestones) and the NE-SW (in the granites) directions to be assessed. Since already ten vears the annual GPS epoch measurements are performed in the Rychlebské hory Mts. and the Jeseníky Mts. by the Department of Geodynamics (IRSM), the recent movements detected by the GPS measurements were compared with brittle tectonic data. Results of both methods were discussed. The research was funded by the Program AS CR for the Support of the Targeted R&D (Project No. 1QS300460551) and the MEYS research programme (Projects LC506 and 1P05ME781).