



Geodetic monitoring of recent tectonic activity of the marginal sudetic fault

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Marginal sudetic fault is a border between main tectonic structures of Sudety Mts. and Fore - Sudetic Block. Geological researches confirms Neogene tectonic activity of this area and suggests possibility of its present continuation. Problem of confirmation of that hypothesis with the use of precise geodetic measurements was undertaken by the authors.

Geodetic research of marginal sudetic fault tectonic activity begins in 70s of XX century. Initial studies using precise levelling were later extended by the GPS observations in the regional GEOSUD network and focused on several geodynamic profiles crossing the fault zone. In the central part of this fault the local geodynamic network "Dobromierz" was established in 2001. Monitoring system applied there is composed of GPS, total station and relative observations.

Objects of analyses are observations from seven precise levelling lines crossing the fault zone, measured in the 1953-2002 period as well as yearly GPS measurements performed in GEOSUD network since 1996 and multi - technique measurements taken in "Dobromierz" network from 2001 to 2007. Horizontal and vertical benchmarks displacement and their velocities were interpreted considering block and terrane tectonic structure of the region.