



## **Geodynamical studies of the Pieniny Klippen Belt in 1994 – 2011**

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The Pieniny Klippen Belt (PKB), which is situated in Southern Poland, is one of the main fault zones on the boundary of the outer and inner Carpathians. The geodynamical investigations which have been carried out since 1960s indicate that PKB demonstrates neo-tectonic activity. In 1994, the GPS measurements were included in the horizontal network and this epoch was used as a reference epoch for the further studies. In 1995-2001, when the measurements were interrupted, the Dunajec river dam and the water reservoirs in Czorsztyn and Sromowce Wyżne have been built. This has created a new aspect in investigations related to the effect of tectonic movements on the dam. Taking that into account, the study was revived and the geodynamical investigations, which contain GPS, relative gravimetric and leveling observations, have been carried out annually, at the beginning of September, from 2001. In 2008, also the absolute gravity measurements (using FG-5 gravimeter) at three stations located in PKB and adjacent geological structures were included in the study. In this paper the result of horizontal displacement in the PKB area obtained from GPS measurement as well as gravity changes obtained from relative and absolute measurements in 1994-2011 period are presented and yields linear trend of horizontal displacement in north-east direction less than 1 mm/year.