



Long-standing absolute gravity changes at Polish fundamental gravimetric network

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First absolute gravity surveys at Polish gravimetric fundamental network were performed at mid-nineties previous century. During measurements were used various ballistic gravity meters with different precise. At 2005 Warsaw University of Technology bought apparatus FG-5 no. 230. Several works connected with modernization of gravimetric network and some scientific projects were started at 2006. In the frame of this work absolute gravity measurements have been performed at about 20 stations, several of them was existing stations with even ten years "history" of observations.

Paper presents analysis of gravity changes at every repeated gravity stations on Poland territory. Results pointed out tendency decreasing of gravity at every points. Volume of this effect is deeply connected with localization in reference to T-T Zone. Majority of analyzed stations are collocated with GNSS permanents stations. It gives a possibility to recognize source of gravity changes. Effect of geometrical relocations and gravitational effect of global hydrology changes will be presented. Attempt of correlation of gravity insitu ground observations with GRACE results will be also presented.

Quasi-permanent absolute g monitoring on Józefosław station has been performed since 2005. Gravity changes are corrected by influence global and local hydrological model. Spectral analysis of gravity signal shows interesting influences a different geophysical and geodynamical phenomena. Result of three and half years such observations will be presented.