



Investigation on field of gravity in Polish tidal laboratories

M. Barlik (1), J. Bogusz (1,2), and M. Kaczorowski (3)

(1) Warsaw University of Technology, Department of Geodesy and Geodetic Astronomy, Warsaw, Poland (jb@gik.pw.edu.pl),
(2) Military University of Technology, Department of Geodesy, Warsaw, Poland, (3) Space Research Centre, Warsaw, Poland

Presently there are two laboratories in Poland investigating field of gravity. The Geodynamic Laboratory of Space Research Centre in Ksiaz is placed in the south-western part of Poland in horizontal galleries built in slope of valley. In 1974 in the laboratory the measurements carried with help of two quartz-horizontal pendulums equipped with photographic system of registration were begun. In 2002 in the laboratory the long water-tube tiltmeter was built. It is consisted of two perpendicular tubes 65- and 83-meter long, partially filled with water. In 2007 in the laboratory there was installed relative gravimeter LaCoste&Romberg G-648. The Gravimetric Laboratory of Astro-Geodetic Observatory in Józefosław is placed in central part of Poland. It has investigated tidal gravity changes since 1993 using first LC&R model G gravimeter, then D-model. Since 2001 laboratory is equipped with LC&R ET-26 meter which is the most precise spring gravimeter. In 2004 the laboratory was equipped with FG5-230 gravimeter for monitoring of the absolute gravity variations. The paper presents current state-of-art of the researches aimed at investigation on field of gravity carried out by Polish scientific institutions.