



## **Tidal investigations at Borowa Gora Geodetic-Geophysical Observatory**

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In 2009 three LaCoste&Romberg model G gravimeters owed by the Institute of Geodesy and Cartography (IGiK) were equipped with a modern type of feedback system (LRFB-300) which gives a wide range of possibilities for gravimetric measurements. One of the modified LCR gravimeters (G1036) is used for continuous tidal recordings in Borowa Gora Geodetic – Geophysical Observatory of IGiK, is situated north of Warsaw. Good quality data is now collected from February of 2012. A set of Linux shell scripts have been developed to provide reliable readout recordings (via bluetooth) as well as automatic handling of any exceptional situations. The system runs with the LCR-G1036 from the beginning of February 2012, and since then the completeness of the recording visibly improved compared to previous recordings reaching nearly 98%.

The tidal observation have been calibrated several times during the course of recordings, four times with the A10-020 and once with the FG5-230. Also some results concerning the calibration of the tidal recordings with relative meters is presented. A special period (end of 2013) is emphasized where the A10-020 performs measurements every hour for a two weeks alongside three LCR meters.

The local tidal model is developed and presented with comparison to the model used in absolute gravity determinations with the A10-020 at Borowa Gora and on the stations of the gravity control.