Accuracy of the FG5 Gravimeters and Some Important Aspects of Repeated Absolute Gravity Measurements

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Absolute gravimeters can detect thin effects caused by mass changes in the Earth?s interior, in the hydrosphere and atmosphere as well as the height changes caused by the geodynamic processes. To get a full benefit from absolute gravity measurements, it is necessary to have, among others, a good knowledge of the instrumental accuracy and of local environmental effects on gravity as the main disturbing effect. These important aspects are discussed based on the results of the absolute gravimeter FG5#215 at many stations in Central Europe and continuous measurement of the superconducting gravimeter OSG-050 at the station Pecný in the Czech Republic.