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Investigation of torsion balance measurements in view of a new combined Hungarian geoid solution.

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Torsion balance measurements in Hungary were checked by least-squares collocation. The methodology was the so-called “leave-one-out” prediction of horizontal gravity gradients. The gradient vectors determined by prediction have been compared to original ones and the differences were tested against 3-sigma confidence ellipses. The method was successfully tested on a selected subset of torsion balance measurements and only few possible outliers have been detected. These computations were started with the purpose of utilizing our very large number of torsion balance measurements in view of a new Hungarian geoid solution.