



## **Verification of new geopotential models at a test area in Finland**

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New developments in satellite gravimetry, modern airborne and surface gravity observations have resulted in production of high-resolution geopotential models. Geopotential models have become essential part of variety of geodesy computations ranging from geoid computation, determination of geoid's potential value, to high-resolution gravity field modeling. The quality of all the geodetic products, which are depending on geopotential models, is driven by the quality of the geopotential model in one way or the other. In this study a throughout verification over the recent geopotential models EGM 96, PGM 2000 A, Eigen-cgo1c, and Eigen-Grace2s have been performed. Southwest of Finland is selected as the test area and the geopotential models are compared in that area for their capabilities to produce geoid at the GPS/Leveling points, norm of gravity at the gravity stations and components of deflection of vertical at the first order astronomical stations. Among the tested models PGM2000A has shown the best overall performance. Details of the study and the results of the comparisons are offered in the paper.