



The official Austrian geoid solution 2008: Validation and Comparisons

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A new Austrian geoid and quasi-geoid solution has been computed as a combined solution of terrestrial gravity field data and global satellite gravity field models.

The methodology and computation process will be presented in details in “The official Austrian Geoid solution 2008” (Pail et.al.), poster session G22. This presentation concentrates on validation of the Austrian Geoid solution and shows comparisons of geoid solutions to neighbouring Countries. Furthermore the practical demands and also problems of this new geoid solution will be pointed out.

Compared to former Austrian geoid models, the accuracy could be improved significantly and the geoid solution has an estimated accuracy in the order of 2-3 cm, compared to GPS/levelling information of 170 thoroughly independent measured and checked points, which are also part of the Austrian Geoid solution. Furthermore in the western part of Austria a comparison to all measured GPS/levelling points (thousands of points), which are not part of the solution, will be given. The western border will be also compared to the Swiss Geoid solution.

Additionally, a quasi-geoid solution has been computed based on identical input data, too. Therefore detailed comparisons of the European and Austrian quasi-geoid solution are given.

Due to the positive conclusions resulting from these evaluation steps, the new geoid solution has been declared as new official Austrian geoid model. The Geoid data are still available since January 2009 at the website of BEV (www.bev.gv.at) and there is a geoid map for free download, too.