
Procedures for the unified european gravity base net (UEGN02) adjustment and experiences

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Abstract: On the occasion of the IAG Scientific Assembly Budapest 2001 it was agreed to work on a unification of European gravity reference networks, also in continuation of some previous works. The adjustment model for absolute and relative gravity observations is quite straightforward. In the course of the realization it turned out, that the real challenge is to cope with the diversity of network structures, data peculiarities and different observation procedures. Although the percentage of data errors is small, the total number is significant. Because of the very diverse possible error mechanisms, it is not possible, to apply schematic decision rules. Rather, the observation information has to be made transparent. To this end, software was developed based on Matlab² with extensive use of graphical tools. The paper focuses on the processing aspects rather than the results for this ambitious project over 16 countries, 1700 stations and some 35000 observations.

Key words: gravity reference network, Matlab, network adjustment

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² Matlab[®]