

New version of terrain corrections in the Slovak regional gravity database

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Abstract: In the frame of the project “Atlas of geophysical maps and profiles” a recalculation of terrain corrections for all 212478 points of the regional gravity database of Slovakia was realized. New approach, based on direct gravity attraction of the DEM (digital elevation model) was developed, tested and realized. The major division of the surroundings of each calculation point into zones and the maximum radius (166.735 km) were not changed in comparison with the older system. The unification and recalculation helped in removing systematic and partly also random errors in the database – this fact was then later reflected in the new version of the Bouguer anomaly map of Slovakia.

Key words: gravimetry, topographical correction, Bouguer anomaly, geographical-geophysical information system, digital elevation model

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