CREATION OF A QUASIGEOID MODEL ON A LOCAL SECTION BY GIS MEANS

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The capabilities of fully functional geographic information systems used in various fields make it possible to simulate the characteristics of the gravitational field, presenting measuring information in the form of continuous surfaces, thereby expanding the area of use of data on the Earth's gravitational field. An important stage of visualization is the choice of a method of interpolating data that provides the highest possible accuracy in creating a digital model of the studied characteristic of the gravitational field. The authors developed a technology for choosing the optimal method for interpolating the characteristics of the Earth's gravitational field in a GIS to create models with an assessment of their accuracy according to the initial data, presented in the form of a technological scheme. The possibilities of the Golden Software Surfer software product for creating a model of quasi-geoid heights from the unevenly presented satellite and geometric leveling data in the study area are considered. A method for interpolating the heights of a quasi-geoid in Golden Software Surfer is proposed, a model of a quasi-geoid in a local area is created. An assessment of the accuracy of the created model according to the initial data is performed.

Key words: approximation of the source data, geographic information systems, geospatial modeling, interpolation methods, Earth's gravitational field, quasigeoid height.

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