

Statistical Proof of Regularities in Combination of Layers and Blocks of Lithosphere (Gravimetric Data)

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Mass quantitative interpretation of the gravity anomalies in many seas, oceans, and continents and particularly on the territory of former USSR was carried out in the class of block (terrain, plates etc.) models of disturbance sources of any form in plan with partly or complete quasi-vertical block limitations. The depths of the upper and lower limitations of density heterogeneity in form of blocks and the density great advance in horizontal direction (contrast density) on the quasi-vertical limitation of blocks for many thousands anomalies were calculated. Statistical analysis of the data mass on the depths of upper and lower limitations of blocks was carried out at some area of land and sea with the use of polygons of density (histograms). This analysis has shown that the lower and upper limitations are close to the distinct lithosphere levels. Mentioned above levels are marked by modes of polygons. The regression of modes was estimated by means of various statistical criteria - criterion of series after chosen median; modified criterion of Bjenayeme; polynomial criterion and others. Levels coincided with the concrete geological-geophysical quasi-horizontal surfaces of stratification. These surfaces were distinguished by drilling, by magnetic-tellurian, seismic, seismologic and other methods of investigation. All this made possible to formulate the following regularity: the lower and upper limitations of density heterogeneities in the form of blocks coincided with quasi-horizontal surfaces of lithosphere dissemination and formed them.