



## **Calculation of the cogeoid heights and gravimetrical deflections of components of the vertical lines on data of clear anomalies of the gravity**

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A modern determination of abnormal potential of the Earth is connected to the decision of a geodetic limiting problem in the points of a physical surface of the Earth which can be known after GPS measurements. Knowing the abnormal potential it is possible to obtaine such important characteristics of a gravitational field as cogeoid height and gravimetrical components of the vertical lines. Specification of a geodetic limiting problem and specification of calculations of the mentioned characteristics of a gravitational field with accuracy to the tenth shares of centimeters and accordingly to the tenth shares of the second of an arch are directed on the decision of the primary problem if geodesy – determination of a figure and an external gravitational field of the Earth. In the work the basic formulas for calculation of cogeoid heights and gravimetrical deflection of components of the vertical lines according clear anomalies of the gravity data, in points of a physical surface of the Earth have been recived. It is necessary to note, that in case of the GPS geodetic limiting problem for clear anomalies of the gravity are used the Neuman - Koch's formulas instead of the Stokes classical formula and the Vening Meinesz transformed formulas. For the decision of these problems there is actual the Molodensky theory and the decision analytical continuation with the help of Taylor lines and GPS measurements.