Construction of Gravity Anamoly Degree Variance Model and Application in Computation of Spectral Sensitivity of Disturbing Gravity Functions

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The analysis of Tscherning,Jekeli and Rapp gravity anomaly degree variance model is made according to the new gravity field model-EGM2008,
the results show that the traditional gravity anomaly degree variance model can't exactly describe the spectral sensitivity of disturbing gravity funtions.
A new degree variance model-TSD model is presented under two spectral sector by using the non-linear least-square regression method, the standard deviations and mean
value of results compared with EGM2008 are respectively 0.25mGal and 0.0mGal .
The spectral sensitivity of geoid undulation,gravity anomaly,disturbing gravity,deflection of vertical are computed by using the TSD model.
The results show that the spectral sensitivity of gravity anomaly,disturbing gravity and vertical deflections increase largely in medium and low spectra.
At the same time,the ratio of both three disturbing gravity functions in high spectra decrease largely.