

## NOVEL APPROACH FOR THE DETERMINATION OF THE CORE-MANTLE BOUNDARY BASED ON "NATIVE" WAVELET TRANSFORM OF THE GRAVITY DATA

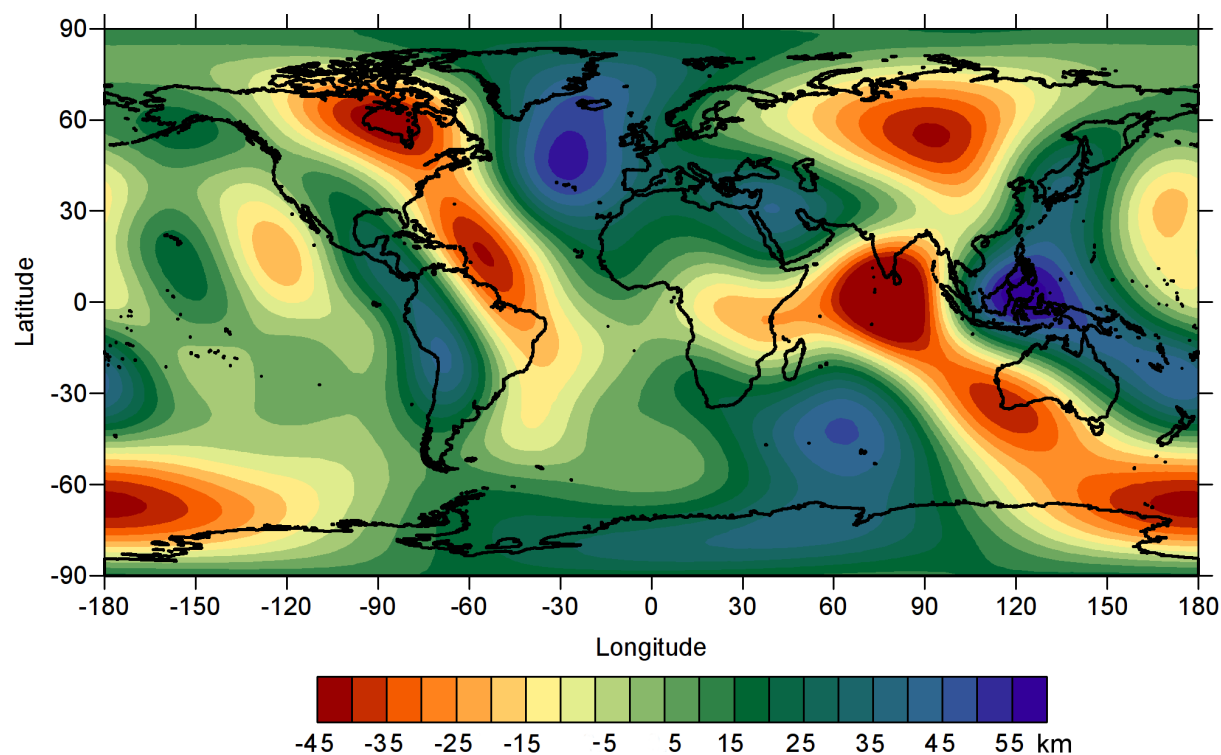
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The hypothesis about uneven structure of the core-mantle boundary was offered in 1957 by Garland [1]. Hide made the assumption [2] that large-scale gravitational anomalies could be linked with irregularities on the core-mantle boundary. Details of topography of the core-mantle boundary based on the seismological data were described in [3], [4], [5].

In this study we propose a novel approach to determine topography of the core-mantle boundary. Our approach is based on continuous wavelet transform of gravity data with the so-called "native" basis. This method was developed specially for analysis data acquired on a spherical surface. The obtained model of core-mantle boundary is in a good agreement with ones from the seismological approach [3] and another gravity approach [6].



**Figure 1.** The topography of deviations of the core-mantle boundary from the spheroid obtained by using continuous "native" wavelet transform of gravity data. Harmonic coefficients of gravity field were received by model eigen-6s2 (ICGEM, <http://icgem.gfz-potsdam.de/ICGEM>).

### References

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