



Supplement of

Crustal structure of the Volgo–Uralian subcraton revealed by inverse and forward gravity modelling

Igor Ognev et al.

Correspondence to: Igor Ognev (ognev.igor94@gmail.com)

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Introduction

This supporting material contains three figures.



Figure S1. Sedimentary cover thickness and its gravity gradient effect. (a) Thickness of sedimentary cover taken from EUNAseis regional seismic model (Artemieva and Thybo, 2013). (b) The vertical gravity gradient effect produced by EUNAseis sedimentary structure discretized by tesseroids.



Figure S2. Main tectonic elements of Volgo-Uralian's Paleozoic Structural stage (redrawn after Postnikov (2002)).



Figure S3. Comparison between the gravity-inverted and IGMAS+ Moho models. (a) Gravity-inverted Moho model obtained through the gravity gradients' inversion with laterally-variable density contrasts (Haas et al., 2020). (b) Moho model developed in IGMAS+ software with measured gravity, gravity gradients, and seismic Moho depth estimates used as constraints for the model. (c) Difference between IGMAS+ and gravity-inverted Moho depths. Two regions with the main differences are: (1) the center of the Valve Uralia with deaper Moho reflected in ICMAS+ model according to TATSELS 2003 profile and (2) South Estatement of the

20 Volgo-Uralia with deeper Moho reflected in IGMAS+ model according to TATSEIS-2003 profile, and (2) South-Eastern part of the area where the Precaspian basin is located with relatively thin seismic Moho which is better reflected in IGMAS+ model.

References

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