



Correction to: Structure, Materials and Processes in the Earth's Core and Mantle

Véronique Dehant^{1,2} · Saioa A. Campuzano³ · Angelo De Santis⁴ ·
Wim van Westrenen⁵

© Springer Nature B.V. 2022

Correction to: Surveys in Geophysics

<https://doi.org/10.1007/s10712-021-09684-y>

During the preparation of this review paper (Dehant et al. 2022), text versions related to seismological views of the Earth's core-mantle boundary (CMB) region unfortunately became mixed up. As a result, an overview of information to be discussed in the paper was inadvertently used as final written material, with only minimal changes and without reference to the original work (Koelemeijer 2021). We are really sorry about this, in particular as the information was kindly provided to one of us (VD) before publication by the author, Paula Koelemeijer. We sincerely apologize to her and, with this correction, want to provide the proper credit to her work. There are a few sentences in our paper that are very similar to those in Koelemeijer (2021). This is particularly the case for the discussion about the density in the bottom of the mantle, identified as two areas of dense anomalies located below Southern Africa and the North Pacific, and the associated elevated topographies. The first, second and fourth bullet points in Sect. 4.2 on page 18 in our paper show strong overlap with the bullet points on pages 21 and 22 in Sect. 9.4.5 of Koelemeijer (2021). If the reader uses the information provided in these parts, we kindly ask them to refer to Koelemeijer (2021) and not to our paper. This is a breakthrough result that should be referred to with the full reference given below. Please consider that we have involuntarily overlooked our mistake. We should have paraphrased the listed section or added quotation marks in the case of a direct quotation, and in both cases the reference should have been added.

The original article can be found online at <https://doi.org/10.1007/s10712-021-09684-y>.

✉ Véronique Dehant
v.dehant@oma.be

✉ Wim van Westrenen
w.van.westrenen@vu.nl

¹ Royal Observatory of Belgium, 1180 Uccle, Belgium

² Université Catholique de Louvain (UCLouvain), 1348 Ottignies-Louvain-la-Neuve, Belgium

³ IGEO, 28040 Madrid, Spain

⁴ Istituto Nazionale di Geofisica e Vulcanologia, 00143 Rome, Italy

⁵ Vrije Universiteit Amsterdam, 1081 HV Amsterdam, The Netherlands

Additional comments that the reader might find interesting and that were pointed out to us by Paula Koelemeijer (private communication 2022) are:

- (a) On page 8, where we mention the work of Koelemeijer et al. (2018) on the features with about 300 km-thick base layers, we note that the paper by Koelemeijer et al. (2018) did not conclude that these structures are thermochemical as mentioned; this conclusion was provided by Lau et al. (2017). Instead, the authors argued for the dominance of the post-perovskite transition for explaining high Vs/Vp ratios observed for the large low shear velocity provinces (LLSVPs).
- (b) On page 18, where we consider the Stoneley modes, we should have mentioned that the two studies discussed here (Koelemeijer et al. 2017; Lau et al. 2017) came to opposite conclusions. We did point this out in other sections of the paper.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Dehant V, Campuzano SA, De Santis A, van Westrenen W (2022) Structure, materials and processes in the Earth's core and mantle. *Surv Geophys*. <https://doi.org/10.1007/s10712-021-09684-y>
- Koelemeijer P, Deuss A, Ritsema J (2017) Density structure of Earth's lowermost mantle from Stoneley mode splitting observations. *Nat Commun* 8(1):Id. 5241
- Koelemeijer P, Schuberth BSA, Davies DR, Deuss A, Ritsema J (2018) Constraints on the presence of post-perovskite in Earth's lowermost mantle from tomographic-geodynamic model comparisons. *Earth Planet Sci Lett* 494:226–238. <https://doi.org/10.1016/j.epsl.2018.04.056>
- Koelemeijer P (2021) Toward consistent seismological models of the core-mantle boundary landscape. In: Marquardt H, Ballmer M, Cottaar S, Konter J (eds) *Mantle convection and surface expressions*, Ch 9. Wiley, Hoboken, NJ. <https://doi.org/10.1002/9781119528609>
- Lau HCP, Mitrovica JX, Davis JL, Tromp J, Yang HY, Al-Attar D (2017) Tidal tomography constrains Earth's deep-mantle buoyancy. *Nature* 551(7680):321–326. <https://doi.org/10.1038/nature24452>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.