

Accepted Manuscript

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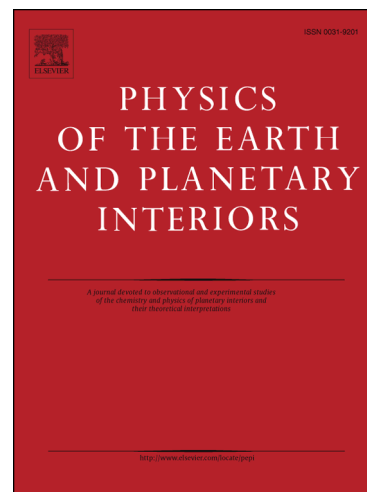
PII: S0031-9201(16)30176-5
DOI: <http://dx.doi.org/10.1016/j.pepi.2016.08.007>
Reference: PEPI 5958

To appear in: *Physics of the Earth and Planetary Interiors*

Received Date: 9 November 2015
Revised Date: 18 July 2016
Accepted Date: 22 August 2016

Please cite this article as: Bosak, A., Krisch, M., Chumakov, A., Abrikosov, I., Dubrovinsky, L., Possible artifacts in the inferring seismic properties from X-ray data, *Physics of the Earth and Planetary Interiors* (2016), doi: <http://dx.doi.org/10.1016/j.pepi.2016.08.007>

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Possible artifacts in the inferring seismic properties from X-ray data

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Abstract

We consider the experimental and computational artifacts relevant for the extraction of aggregate elastic properties of polycrystalline materials with particular emphasis on the derivation of seismic velocities. We use the case of iron as an example, and show that the improper use of definitions and neglecting the crystalline anisotropy can result in unexpectedly large errors up to a few percent.

Highlights

- Neglecting proper elastic averaging procedures introduce few percent error in the estimated seismic velocities.

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