

Dear Editor Solid Earth,

We do acknowledge the detailed reading and comments of the reviewer. We have tried to meet the reviewers concerns in the present update. Unfortunately, the time-frame with dead-line of 18 July does not allow for a full linguistic revision by a professional reader as suggested by the reviewer. We have therefore revised the manuscript ourselves to our best ability. Our revised manuscript (3rd revision) has been uploaded on the Solid Earth Net page. **Please note that the line numbering in the letter from the reviewer refers to the tracked changes version used by him/her and will therefore not match line numbering in the corrected manuscript.**

We have scrutinized the full and all specific comments from the reviewer have been acknowledged. We have particularly focused on shortening and simplifying of long and complex phrasings and sections. Thus, we have made some grammatical corrections/simplifications in addition to those identified by the reviewer and corrected some minor printing errors. Our revision includes the following: We have

Identified and corrected some minor typos

Deleted some words that were duplicated or in excess

Added a few words that were missing

Split and shortened several very long sentences/sections

Adjusted style of headings to make sure that they become systematic and in accordance the structure/hierarchy of the paper (1st-order, 2nd-order, ..)

Please note that we have consequently used the abbreviation “e.g.” (exempli gratia) throughout the manuscript, because this format (rather than “eg.”) is the standard recommended in Webster’s dictionary.

Lines 6-7: The name of one of the authors have been misspelled in the heading of the manus (corrected in this version): Giennenas should be Giannenas. References and reference list have been corrected accordingly.

With reference to the points of improvements specified by the reviewer, the following corrections have been performed:

Lines 101-109: Long sentence has been simplified and divided into shorted sentences.

Lines 128-130: Sentence rephrased.

Lines 154-157: Introduction to section is rephrased.

Lines 186-189: Misprint has been corrected.

Lines 219-220: Sentence has been simplified.

Line 245: Misprint corrected.

Lines 252-259: Rephrased

Lines 441-405: Reflection seismic data-chapter (p.8): Unclear statements are rephrased.

Experimental set-up (lines 402-549): Adjustments of unclear points in text.

Line 518-557: Phrasings simplified and specified.

Line 576: Sentence adjusted

Line 609: Superfluous reference removed

Lines 623-625: We find that this description is correct and in accordance with descriptions in the literature (Woodcock & Fischer 1986; Woodcock & Schubert 1984 and Twiss & Moores 2007) and have kept the phrasing as it is.

Figure 8: Caption rewritten

Lines 686-687: This phrase describes well the observations of the experiments, so we have kept it as it is.

Figure 9: Caption rewritten

Figure 11: Caption adjusted. Misprint concerning color of N-arrow corrected

Lines 795-1173: Several sections have been simplified/re-written to avoid unclear phrasings and explanations.

Lines 1113-1123: Albeit repetitive, we have kept the introduction to the Discussion as it is, because we think this is relevant for the reader who jumps directly to the conclusion.

Figure 2: Inconsistency regarding terms TWT/Twt has been corrected

We hope that these corrections are acceptable by the Editorial Board and look forward to see the final version. Thank you very much for your patience and cooperation.

Best regards

Roy H. Gabrielsen

On the behalf of the authors