

Answer to the review of manuscript GJI-16-0524.R2 (2016-12-07) and concerning changes in the version R3

Dear Editor and Reviewers

We thank a lot the accurate reading of reviewers through the several stages.

In this new version, we have changed the references as proposed by reviewer 1 and we have corrected the remaining typos we have seen. Moreover, in order to follow the recommendations of both reviewers for improving the submitted paper, we have modified the introduction and the first part called method. The objectives of these modifications aim to make the text more synthetic, and to reorganize the subsections in order to announce each aspect of the issue only one time and thus avoid redundant parts. We hope this new version will clarify the approach and make it easier to be read.

For that, several sentences have been removed and some others have been changed of place in the text.

1) In the introduction part the following lines in the previous version have been removed :

Lines 98-100

Lines 101-108

Line 116

Lines 125-127

Lines 139-142

Lines 168-174

Moreover lines 128 to 139 in the previous version are now written in the part concerning the Measurement bench presentation

2) In the first part called “Methods”, the following lines in the previous version have been removed :

Lines 192-196

lines 206-208

Lines 247-255

Lines 208-210 are now inserted in the following paragraph (at the end of the third paragraph of the subsection 2.1 in red color) :

“Thus the emitted signal is not resonant but the sensor response combined with the coupling effect to the model behaves as a filter for the source shape, **which depends on the frequency. It is possible to assess this effect by taking into account the entire waveform of the pulse** as already presented in (Bretaud et al. 2011) where this crucial point has been tackled in a first approach with an assumption of 2D propagation.”

Moreover several parts have been re-arranged and the resulting text tackles successively the following aspects highlighted in several color :

In the subsection 2.1 called “Physical modeling: MUSC laboratory”

- in color red : the text mentions the general measurement bench principle and its specifications
- in color green : the text mentions the spatial source pattern specificities in MUSC

- The last lines are a transition before the following part.

In the subsection 2.2 called “Characteristics of the scale models tested”

- in color blue : the text mentions the models parameters used in the study
- in color orange : the text mentions the frequency and the scale ratios used
- in color purple : the text mentions the position precision related to the wavelength and the comparison to field measurement scale (including the scaled frequency band).
- in color brown : the text mentions the measurement setup used in the study in the following parts
- The last lines are a transition before the following parts.

3) Tables

Tables have been re-arranged. One table has been removed (scaling properties) and the table about properties of materials has been updated.

4) Figures

“Legend of Figure 1 is not correct,...”. Indeed. Corrected.

5) References

“..., some of the references are incomplete...”. References have been checked and corrected.

6) Typos and writing mistakes

Hope we have corrected all of these.