

Comments on “Discussion on using only one linear array to estimate the phase velocity of Rayleigh wave based on microtremor survey”

The purpose of the manuscript is to show that both CCF and GA methods, with a reduced quantity of seismic sensors in a linear array, can be used to produce robust estimates of phase velocity of Rayleigh waves. The manuscript is an important contribution, but it needs some small corrections as described below.

1 – The English is very good, but some words should be corrected (lines 30, 313 and 404). These are typing errors.

Answer: I have corrected them. However, I have not found the error in line 30. Could you tell me which one the error turns up?

2 – Figure number must be corrected (line 115).

Answer: I have corrected it (line 125).

3 – Label of some figures are very reduced. For example, in Fig. 3 the label is “Assumed phase velocity”. Is this figure is related to which equation in the text? The same for figures 5, 6, and 7. In Fig. 7, the unity can be written as “degrees”.

Answer: I have added description to avoid confusion. And the “degrees” is added. (line 202, 207 and 264)

4 – The numbers of the sub-section on section 3.2 must be corrected.

Answer: I have corrected it. (line 218, 311)

5 – In mathematics, the symbol of “abs” is represented by two vertical bars ($| |$).

Please, substitute all “abs” in the manuscript by $| |$.

Answer: I have modified it. (line 253)

6 – In the field test section (figures 11 and 12), the authors present a visual analysis of the results. I suggest the authors to use the correlation coefficient (or the root mean square – RMS) between the two curves (in the frequency range analysed) to quantify the degree of similarity between those curves.

Answer: Thank you for your comment. I have added the calculation and corresponding figures to make the comparison (analysis) clearer. Instead of using RMS or correlation coefficient, I used the absolute difference between each two curve and calculated their mean. Please read the text. (line 409-426, line 441-445)

7 – In line 350, the authors presents three intervals, but in any part of the manuscript the authors define the criteria for selecting such intervals. It important to the reader to know how to define these parameters ? This important detail must be clear in the text.

Answer: I have added description about it. Please read my text. (line 352-364)

8 – As in section 3, both 4.2 and 4.3 sections can be place together as section 4.2 (Results and Discussion).

Answer: I have placed them together. (line 371)