

## ***Interactive comment on “Study on Site Amplification Factor Correction for Earthquake Early Warning System” by Quancai Xie et al.***

### **Anonymous Referee #2**

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The submitted manuscript presents a case study for a recently proposed method for the estimation of a frequency-dependent site amplification factor. The core idea is interesting and falls into the interests of journal's readers but there are some major scientific and technical issues that need to be clarified and corrected in order the manuscript considered for publication. My comments and suggestions are: 1) The authors state in the title the term "Earthquake Early Warning System" (EEWS). I suggest to remove this term from the title since the authors fail to prove the relation of their proposal to the purposes of an EEWS. More specific: a) All the introduction section presents a classical historical review of EEWSs without pointing the (possible) relation between authors proposal and EEWS. b) In section 4, the only reference to the (possible) embedding of results to an operational EEWS are given by the statement at the end of

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p.15 : "It will have good potential application in the future EEW system". this is obviously not adequate and does not prove the usability of the proposed method for the purposes of EEWS. What the reader will expect to see is for example, block diagrams of where and how the proposed method will co-integrate with other elements of EEWS, the performance of EEWS with the addition of proposed method (even in simple terms of false alarms/missed alarms) and so on c) In addition, at discussion section, the authors didn't provide a satisfactory discussion of how an EEWS will be benefited from the proposed method 2) The abstract must be reorganized in a more concise form. At the current version this is not informational because there are many unnecessary details. Authors must provide very clearly what is the problem, the method and materials used and what is the contribution 3) A native English speaker must furnish the grammar and syntax of the manuscript. In the present form it is not recommendable for publication 4) Authors must check the presentation of their tables. there are abbreviations that are not explained before. There are titles that are not properly aligned (i.e Table 3 "Amplification((IBRH....)" and units are missed. 5) Please provide the same level of information on each figure caption. For example at fig.7 , authors define each graphic element where at fig.5 they don't. 6) What averaging method was used for smoothed spectra? 7) Authors must provide a paragraph discussing the performance of their method to similar ones as they refer to them in introduction in order to strength their findings. 8) Authors must provide a paragraph discussing potential pitfalls and drawbacks or their proposal in relation to local conditions and/or network density

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