

## ***Interactive comment on “Calibrating a New Attenuation Curve for the Dead Sea Region Using Surface Wave Dispersion Surveys in Sites Damaged by the 1927 Jericho Earthquake” by Yaniv Darvasi and Amotz Agnon***

**Anonymous Referee #2**

Received and published: 18 November 2018

Review of manuscript from Darvasi and Agnon: Calibrating a New Attenuation Curve for the Dead Sea Region Using Surface Wave Dispersion Surveys in Sites Damaged by the 1927 Jericho Earthquake

This manuscript contributes to the applied research tasks of attenuation curve setup for regions suffering earthquake hazard. These are needed to give better estimates on ground motion in case of an event. In the lack of strong motion data in the region under consideration, both historical and MASW experiment datasets are evaluated in the Dead Sea region.

C1

A major concern I see for this manuscript is the determination of dispersion curves and values from the experiments that are needed to establish the adapted attenuation function. Data are not shown in Chapter 3, and also the derivation of results and uncertainties are not given. This needs to be provided to the reader. As given here, one is not convinced. In the same line, the optimization of the constant (p.7, line 6) is only mentioned but not explained. These points must be better elaborated and proven in the methodical section. Furthermore, a discussion of the directivity of amplification is entirely missing.

General language: in parts very colloquial and not scientific/precise enough. Phrasing like somewhat, incomplete referencing, mentioning of authors without year of publication etc. might give an impression of rushed writing, that must be thoroughly revised.

Abstract: be more precise, what are specific results?, this is rather an intro plus technical description.

Introduction: description of formula 1 is incomplete in text.

Methods: it is not clear if the term offset is used properly. It rather seems to mean profile distance in meters?

Results: this chapter is completely inappropriate, because no data is introduced, nothing described, and no workflow given to the reader. Thereby, it is not possible to judge quality of results and be confident in the outcome.

Discussion: some parts like velocity determination would belong to the results. The remaining discussion should also include a discussion of comparing achieved results here with other authors methods and workflows, not for the region alone but especially seen in worldwide literature.

Most of the figures are only mentioned in the text but need proper description there, too.

Figure 1: could be less sketchy. Figure 2: ...map made by JKH -> give proper ref-

C2

erence or include him as author, if considerable work was done. Figure 8+9: correct legend spelling. Figure 9: what is second measurement ?, this is unexplained and not understandable. Figure 11: incomplete references in legend, caption:....dots mark suspected.....

In summary, this paper can grow to being worth published, but it is at the border and needs thorough major revision.

---

Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2018-52>, 2018.