

Interactive comment on “Estimation of near-surface attenuation in the tectonically complex contact area of the Northwestern External Dinarides and the Adriatic foreland” by S. Markušić et al.

S. Markušić et al.

markusic@irb.hr

Received and published: 29 April 2019

Reply to Interactive comment of Anonymous Referee #1

The authors wish to thank the Anonymous Reviewer for the very constructive remarks. Below are listed our comments, especially those referring to the comments the reviewer marked as "main comments".

1. Language changes proposed by the reviewer are incorporated in the manuscript. However, it is important to indicate that the manuscript was certified (after proof-

C1

reading), before the submission, by the authorized translator, a native English speaker. 2. The majority of sentences that the reviewer asked to be rephrased or deleted are reformulated/rewritten or deleted and, where it was indicated, the explanations are added (comments 11, 13, 14, 16, 17, 19, 21, 23 and 24). 3. Figures 1, 2 and 3 are also corrected (supplemented) according to the reviewer's comments (comments 1-8, 12). 4. As suggested, the focal mechanisms, and their comments, are added to Chapter 2 (comment 10). 5. The Chapter 5 (Macroseismic field) is re-written upon reviewer's suggestions (comment 22). 6. Comment 9: The seismic data from 60' and 70' are actually the only data for the offshore and inland islands of the Adriatic Sea in the area that is in the focus of the manuscript. So, we modified the sentence accordingly. 7. Comment 15: The detailed explanation is added: "Typically, the standard error for R_e amounts to $\pm 3\text{--}5$ km (Marijan Herak, personal communication) and for these particular cases, with error in κ set to 2 standard deviations ($\sim 0.01\text{--}0.02$ s), differences between standard linear regression and error-in-variables linear regression are less than 5 %. With less data, large data scatter and lack of data at shorter epicentral distances, differences between two regression methods could be significant. Therefore, for shorter epicentral distances we set errors to be in order of 5 km, while for higher distances (> 100 km) we set 10 km." 8. Comment 18: The following is added: "These effects can be explained by observations that fault zones are often characterized by complex rupture pattern that favour both scattering and generation of trapped waves (within the waveguides) in terms of 10–20 km propagation through low velocity and spatial variation of low intrinsic Q_i near the source, caused by the high level of fracturing that characterizes the fault zones." 9. Comment 20: We modified the sentences and moved one with the aim to put everything into the context. In the added sentence we tried to interpret the observed overlap of the ND anomaly and the kappa decrease.

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2019-4/nhess-2019-4-AC1->

C2

supplement.pdf

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-4>, 2019.