

## ***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.***

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I think that the manuscript is, in general, good organize and newsworthy. But, there are some items which should be improved, and moderate revision is suggested.

The main problem of the manuscript is that there is no clear connection between geophysical and geological data, so geological interpretation should be improved. For example, the sentence at lines 29-30 (page 7) should be replaced with more detailed discussion, especially "the mentioned lithospheric decoupling".

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Last two sentences in the Abstract (lines 16-19, page 1) are too general and should be replaced with concrete statements.

I do not agree with the chapter 6 "Estimation of near surface attenuation - a summary and some conclusions". This chapter should be completely rewritten and the conclusions should only be kept, which means the main results of the work should be clearly emphasized. I also suggest to create the chapter Discussion with detailed interpretation of the data and explanations about the geological meaning of the geophysical results. The chapter Macroseismic field can be also included in this chapter.

There are also several incorrect or imprecise quotations:

Page 3 - Line 17 - Quotation of (Šumanovac et al., 2017) should be replaced by (Šumanovac et al., 2009; Šumanovac, 2010). Comment - Mohorovičić discontinuity and crustal structure in the survey area was determined by the mentioned gravity and seismic refraction data in the references: 1) Šumanovac, F., 2010. Lithosphere structure at the contact of the Adriatic microplate and the Pannonian segment based on the gravity modelling. *Tectonophysics*, 485, 94-106, doi: 10.1016/j.tecto.2009.12.005. 2) Šumanovac, F., Orešković, J., Grad, M., ALP2002 Working Group, 2009. Crustal structure at the contact of the Dinarides and Pannonian basin based on 2-D seismic and gravity interpretation of the Alp07 profile in the ALP2002 experiment. *Geophys. J. Int.*, 179, 615-633, doi: 10.1111/j.1365-246X.2009.04288.x.

Page 3 - Line 29 - Aljinović et al., 1984; Grandić et al., 2002 are wrong references. The citation should be: Gravity map of Yugoslavia, 1972. *Gravimetrijska karta SFR Jugoslavije - Bouguerove anomalije*, 1:500.000, Federal Geological Institute, Beograd.

Page 7 - Line 9 - Quotation of (Grad et al., 2009) should be replaced by the original references. Comment - Grad et al., 2009, took the data from: Brückl, E., Bleibinhaus, F., Gosar, A., Grad, M., Guterch, A., Hrubcová, P., Keller, G.R., Šumanovac, F., Tiira, T., Yliniemi, J., HegedÅss, E., Thybo, H., 2007. Crustal structure due to collisional and escape tectonics in the Eastern Alps region based on profiles Alp01 and

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Alp02 from the ALP 2002 seismic experiment. J. Geophys. Res., 112, B06308, doi: 10.1029/2006JB004687. The depth of the Mohorovičić discontinuity in Istra can be also found at: Orešković et al., 2011 (Orešković, J., Šumanovac, F., HegedÅss, E., 2011. Crustal structure beneath Istra peninsula based on receiver function analysis. Geofizika, 28, 247-263)

There are more remarks and corrections also, which are marked in the attached pdf-file.

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2019-4/nhess-2019-4-RC2-supplement.pdf>

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