

Response to Interactive comment on “*Passive seismic experiment ‘AniMaLS’ in the Polish Sudetes (NE Variscides)*” by Bociarska et al. by Wolfram Geissler, 11 Jun 2021

Dear Dr. Geissler,

We are grateful to have received your review of our manuscript which led to important improvements of the manuscript. Below we address your comments in detail. Our responses are written in bold font.

The manuscript presents a passive seismic experiment carried out in the Polish Sudetes, an important region to understand the tectonic evolution of the Variscan Orogen in Central Europe. The authors present how a state-of-the-art seismological experiment was and can be carried out. Furthermore, the authors discuss the quality, the potential and limitations of the data set.

I have two major points that should be considered for a revision of the manuscript: 1) I miss a more clear, elaborated introduction into the geology and tectonics of the study area. Why it is important to study this region in more detail?

A: OK, we added broader description of geology and tectonics, as well as motivation.

2) Some of the figures need minor revisions, e.g, Figure 1 is missing more geographical or geological names. Maybe the geological map should be placed earlier in the manuscript. Furthermore, it is missing a legend.

A: OK, geographical names were added to Fig. 1. We added the legend to Fig. 3 (geol. map), and this figure is renamed to be now the Fig. 2., so we can refer to it in the Introduction.

All subfigures should have similar scale (e.g., Fig. 13).

A: OK, we used the same scale, and according to the suggestion in the annotated pdf, beside the ‘night’ PPSDs version we added also ‘day’ PPSDs version for comparison. Discussion of the figure in the text is changed accordingly.

Additionally, all abbreviations should be introduced (both in text and captions). Please rethink, if the term "Tertiary" is necessary to use. It is not an official term anymore.

A: OK, abbreviations are now explained. “Tertiary” is removed.

Minor comments, questions, suggestions you will find in the annotated manuscript.

A: OK, we addressed all remarks from the annotated manuscript. Our explanations are added to the annotated manuscript, attached as a supplement to this discussion. Corrections accepted by us are mostly left unmarked or sometimes marked with green and with our comments in speech bubbles to clarify the point. Very few suggestions that we would prefer to decline are marked with dark yellow color, with our comments in speech bubbles in order to explain the reason.