Response to Reviewers' comments on the manuscript egusphere-2025-1231

Seismic anisotropy under Zagros foreland from SKS splitting observations

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We are grateful for the attention of the associate editor to our manuscript and for second review by the reviewer 1 and their helpful comments.
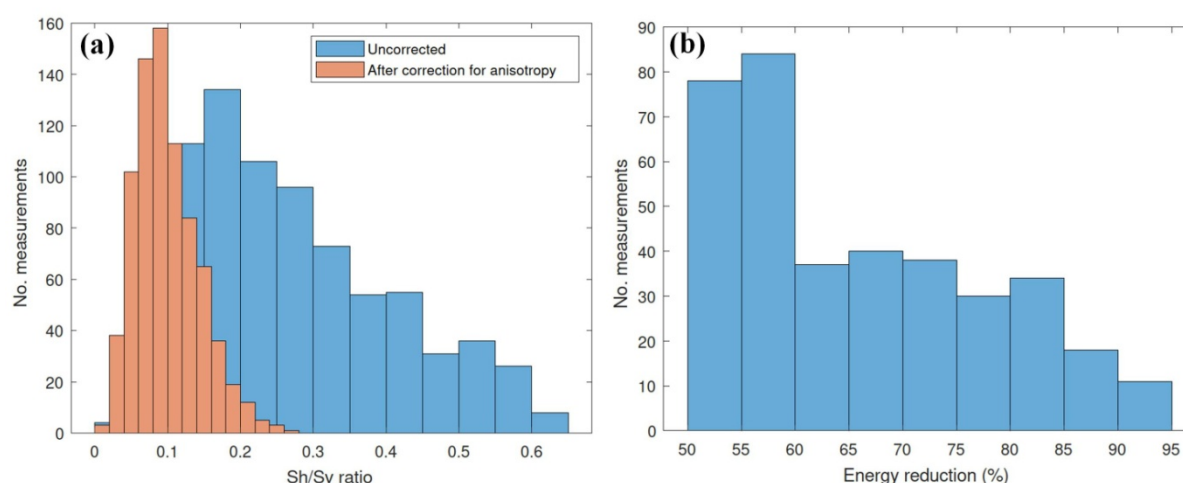
Comment by the reviewer:

This is my second iteration in reviewing this work. Authors' answers and actions taken for my comments are usually satisfactory. However, my critic for %50 of threshold still need to convince the reader to make sure the reliability of the results. Thus I would like to see the all individual splitting measurements to have a feeling how elliptical particle motion is corrected back to linear particle motion after correcting for anisotropy during the splitting measurements.

So it is better for me to check all of the individual measurements to feel OK.

Response:

Following our second revision, we also consider that this part was not clearly explained in the previous version of the manuscript. Therefore, we have modified this part (lines 110–121 in clean version) based on the analysis of energy distribution of the T-component seismograms before and after correction for the effect of shear-wave splitting. The results of this analysis are shown as Figure S1 in supplementary information. These figures are also included here.

As shown in this Figure (panel b), reductions of T-component energy up to 95% are observed, but most measurements cluster between 50% and 60%. The T/R energy ratio is already low before correction (panel a, blue charts), so only moderate energy reduction is expected after

correcting for anisotropy. The post-correction T/R energy distribution (panel a, orange charts) further confirms that low T-component amplitudes are left, indicating linear R-T particle motion after correction for anisotropy.

All individual measurements are provided in Table S2 of the supplementary information.