Innsbruck, September 15, 2023

## Revised manuscript for publication in Solid Earth

Dear Professor Schreurs,

We would like to thank you for your comments and for giving us the opportunity to improve our article "Fold localisation at pre-existing normal faults: Field observations and analogue modelling of the Achental structure, Northern Calcareous Alps, Austria" by Willemijn S. M. T. van Kooten, Hugo Ortner, Ernst Willingshofer, Dimitrios Sokoutis, Alfred Gruber and Thomas Sausgruber. We have incorporated all suggestions and are glad to present a final revised version of the manuscript.

Below we respond to all the suggestions and reference the edits in the revised manuscript.

On behalf of the authors,

Willemijn van Kooten

## Topic Editor:

Fig. 1. When printed the blueish colors all merge into one single "blue" both in the overview map and cross-section. The different units can no longer be distinguished. Please improve, e.g. by adding a pattern (dots or symbols) to the various units

We thank the editor for this excellent suggestion and have improved the graphical presentation of the various units.

Fig 1 (a) should be: Tectonic map showing the location of the Northern Calcareous Alps in Austria......

Figure caption changed to: "Figure 1: (a) Tectonic map showing the location of the Northern Calcareous Alps in western Austria. [...] (c) Geological map of the Achental structure within the Karwendel thrust sheet. Black lines show isopachs of the Upper Jurassic Oberalm Fm [...].

Throughout the text: it should be "Rhaetian" instead of "Rhätian"

Done.

In Table 1: unit of strain is " $1 / \mathrm{s}$ " (and not $\mathrm{m} / \mathrm{s}$ )

Strain rate in Table 1 changed to "Convergence rate".

In Table 2: Plate border designation should be "Straight" "instead of "Straigth"

Done.

Line 415: "analogue model" instead of "analoging"

Done.

In all figures presenting model surface results, I suggest that the figure panels reflect shortening increasing from left to right; and that the individual model results (of one particular experiment) are always presented in rows.

We have implemented these changes in all figures presenting model surface results.

Line 537: "inversion" instead of "inversional"

Done.

Further changes in the revised manuscript include improvements in Figure 2, small corrections in figures, tables, spelling and grammar, and updating the citation style to match the journal requirements.

