

Interactive comment on “Linking Alpine deformation in the Aar Massif basement and its cover units – the case of the Jungfrau-Eiger Mountains (Central Alps, Switzerland)” by David Mair et al.

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General remarks The manuscript is dealing with structures formed at peak conditions of very low-grade to low-grade metamorphism at the NW margin of the Aar Massif. Although the area is highly challenging for geological work, these structures are well documented and a succession of structures is established, which are related in part to established phases. The arguments for timing of all these phases are not well constrained in the manuscript itself, particularly for readers outside of the Alpine community. Consequently, I recommend add a few sentences on which geochronological

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and/or sedimentary data the timing of these phases is based. The manuscript is well written, the data are after my knowledge new and contribute to the interpretation of root zone of Helvetic nappes. I recommend publication after some minor to moderate revision, the new data warrants publication.

Specific remarks (see also enclosed annotated pdf-file with further remarks and few corrections of typos). General: use “sedimentary rocks” instead “sediments” (which is rather Central European use). Line 15: ... multiple deformation stages before and during the Aar Massifs rise: You mean rise or exhumation? Line 18: vertical or horizontal block extrusion models? Line 21: Looking foer Fig. 1b, it is difficult to recognize the NW-SE strike of teh frontal margin. The overall margin seems rather NE-SW trending. Line 24: be specific: pre-Alpine (Variscan) crystalline substratum Line 52: synthesized lithostratigraphic framework Line 124: Show trace of the “Jungfraubahnen” railway tunnel in Fig. 2. I could not find it. Line 234: Why the jump suddenly to the model Fig. 11b? Line 329: ould you show these reactivated normal faults resp. thrusts on Fig. 2? Line 353: weaker sedimentary rocks than what other rocks? Figure 1: Why post-Variscan intrusives. It seems rather late-stage Variscan. Fig 3: Explain mineral abbreviations in Rows 2 and 3. i) These two generations of minerals are difficult to recognize. Fig. 8: Explain mineral abbreviations. Use crinoid or echinodermata instead of echinoderm. Fig. 11: Also indicate the potential root of the incorporated basement slabs in (a). Table 2: The table needs some corrections of typos. Furthermore, explain in caption what you mean with "Confidence" and "Local only?" Table A1: The table needs some corrections of typos. Appendix A: Geological map compilation and Mesozoic litho-stratigraphy: Some corrections are needed, too.

Please also note the supplement to this comment:

<https://www.solid-earth-discuss.net/se-2018-49/se-2018-49-RC2-supplement.pdf>

Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2018-49>, 2018.

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