

Interactive comment on “The role of mechanical stratigraphy on the refraction of strike-slip faults” by Mirko Carlini et al.

Billi (Referee)

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Received and published: 28 December 2018

Dear Editor,

I have read with interest the manuscript on the “The role of mechanical stratigraphy on the refraction of strike-slip faults” from the Northern Apennines, Italy. The manuscript is very well written and the science is sound. In my opinion, it could be substantially published as it is. I have, however, a few comments that may contribute to further improve the work by Carlini et alii.

(1) In my opinion, as it is, Fig. 3 is not useful. I suggest Carlini et alii either to omit it or to improve it. In this latter case, more micro-photographs at different enlargements showing various lithological features and details are necessary.

(2) The core of this study is this particular exposure with incipient refracted fractures/faults. I suggest Carlini et alii to further document this exposure and the refracted faults/fractures with some additional photographs.

(4) If I understand well, Carlini et alii exclude that the studied strike-slip faulting are somehow associated with the thrust evolution. I suggest to further discuss/clarify this point.

(3) The study and related results are surely sound and interesting, but I will be frank about my final sensations. After reading it, I do not really understand what I can carry home. In other words, what are the implications (at different scales and in various settings) of these results? And what is the usefulness in tectonics (and other disciplines)? How and where I can use the results provided by Carlini et alii? In synthesis, I suggest Carlini et alii to further discuss the implications and usability of their results in the geosciences?

Sincerely Andrea Billi December 2018

Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2018-72>, 2018.

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Discussion paper

