

Solid Earth Discuss., referee comment RC3
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Comment on se-2021-73

Alessandro Maria Michetti (Referee)

Referee comment on "Late Quaternary faulting in southern Matese (central Italy): implications for earthquake potential in the southern Apennines" by Paolo Boncio et al., Solid Earth Discuss., <https://doi.org/10.5194/se-2021-73-RC3>, 2021

The manuscript is an interesting contribution for the characterization of seismic hazard from a major earthquake fault in Southern Italy, along the Southern Border of the Matese Massif. The collected data are excellent, and very detailed. The general geologic and seismotectonic interpretation is convincing. My main comment is on the San Potito fault exposure along the Gioia Sannitica segment. I suggest to provide a general geological cross section of this exposure, to help the reader to understand the details presented in Figure 8 and 9. In my opinion, the most relevant result here is that the fault must have been activated at this site during late Holocene. The implication is that at this site capable faulting shifted basinward, moving from the range front to the piedmont belt. The explanation of this shift is not clear, and must be discussed in the revised version of the manuscript. In any case, this is a relevant new result, and very interesting one. One may argue that the Matese Southern Front might have been characterized by large slip-rate fluctuations during the mid to late Quaternary.

Some specific comment is included in the attached annotated manuscript.

Please also note the supplement to this comment:

<https://se.copernicus.org/preprints/se-2021-73/se-2021-73-RC3-supplement.pdf>