

Solid Earth Discuss., referee comment RC3
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Comment on se-2021-35

Anonymous Referee #3

Referee comment on "A revised image of the instrumental seismicity in the Lodi area (Po Plain, Italy)" by Laura Peruzza et al., Solid Earth Discuss.,
<https://doi.org/10.5194/se-2021-35-RC3>, 2021

In this paper, the authors provide new information about the seismicity in the area of Lodi (Po Plain, Italy), considering recorded historical seismicity and the difficulties due to instrumental differences with the most recent times and instrumentations. The results will add new information about source locations in the area, which can be helpful for the seismic hazard assessment for the Po Plain.

The text is probably too long, particularly when describing the data providers. I suggest adding some statistical graphs (if possible) and to make clearer the differences between old and new locations.

Specific comments:

Line 63: why have you chosen 3 Km as the maximum ID distance from the reservoir (and 15 km for the ED)? Any reason in particular?

Probably it is not clear enough to me, but are the events between 0-10 Km in Figure 5 now deeper due to the new locations (in Figure 8)? It could be helpful to have the previous locations and the new ones in the same figure (maybe just black and red dots), or side by side, to make it clearer.

It can be interesting to have histograms comparing the RMS, SEH (or ERH) and SEZ (or ERZ) before and after the relocations. This could help even further in understanding the differences given by the relocations.

Can the cluster of events, SE of Figure 8-profile B, be related to the active fault (thrust) slightly north of the cluster? Are there any events (among them) suitable enough to obtain focal mechanisms?

Minor comments:

Figure 1: What are the short and thin grey lines in the figure? Seismic profiles?

Figure 3: the yellow arrow is not visible enough. I suggest changing the colour (red?).

Figure 4 is not cited in the text.