Comments to the paper “Integrating macroseismic intensity distributions by a probabilistic approach: an application in Italy” by Antonucci et al.

The paper is sound and well written. I suggest it is published after the authors have answered the following questions:

Table 1, I’m very surprised that the q(Delta I)all relative frequencies are perfectly symmetric (to the fifth figure for -1 and +1) while for example the q(Delta I)near ones are not.
This is due to the fact that for $q(\Delta I)_{all}$ all the localities within a radius of 20 km from the site are considered, whereas for $q(\Delta I)_{near}$ only the nearest one is taken into account. In case of $q(\Delta I)_{near}$ this means that, for example, if locality B is the nearest one to locality A, locality A might not be the nearest one to B (e.g. the nearest locality is C) and, thus, the ΔI value between A and B (i.e. $I_B - I_A$) is computed only once. In case of $q(\Delta I)_{all}$, instead, locality B is considered among the localities within 20 km from locality A and vice versa, thus the ΔI value between A and B is computed twice (i.e. $I_B - I_A$ and $I_A - I_B$) and the relative frequencies result symmetric.
In other words, for $q(\Delta I)_{near}$ we can have $I_B - I_A$ and $I_C - I_B$ (not $I_A - I_B$), whereas for $q(\Delta I)_{all,}$ we always have $I_B - I_A$ and $I_A - I_B$.

The caption of Fig. 1 swaps the two panels: actually left panel refers to localities within 20 km and the right one to localities within 10 km.
Thank you, it was a mistake and we will correct it in the revised manuscript.

Line 279-282. “Figure 9 shows the modal values of the probability distribution pI(Is|Iv) computed 280 at each of the 968 localities assuming as prior distribution the probability derived through the IPE (Pasolini et al., 2008; Lolli et al., 2019) and using the intensities observed at all the localities within 20 km (analysis c). Such values are compared with the intensities (expressed as modal values) predicted by the IPE alone.”
I see only one map (maybe with intensities computed using the procedure proposed in the paper) and not a second one (maybe with intensities predicted by the IPE alone). Hence, I cannot make the visual comparison the authors suggest. Please add the second map or (if I misunderstood the argument) please better explain the point. I also do not understand the need of the inset with the central area zoomed by a factor of 1.5 or less.
The map in Figure 9 shows both the modal values of the probability distributions computed at the 968 considered localities with our procedure (small dots) and the modal values predicted by the IPE alone. The latter are represented with colored circles that bound areas of different intensity values. In the revised manuscript we will better explain this point. Moreover, we will also remove the inset on the map.

Line 390. Please provide where (e.g. a web site) the paper by Lolli et al., and more in general the “Il modello di pericolosità sismica MPS19 , rapporto finale” edited by Meletti and Marzocchi, can be found. In my knowledge the latter is not a public domain document.
Meletti and Marzocchi (2019) is an internal project report. MPS19 is described in the Meletti et al. (2021; https://doi.org/10.4401/ag-8579) and references therein.