

Interactive comment on “A scoring test on probabilistic seismic hazard estimates in Italy” by D. Albarello et al.

D. Albarello et al.

lperuzza@inogs.it

Received and published: 9 December 2014

We are particularly glad to Ref. #3 for the careful analysis of the text. All the comments have been accepted and entered in the text, we leave to the Editor the final decision about orientation of Fig. 2 of the original manuscript.

Conceptual comment In the new version of the paper, aleatory variability and epistemic uncertainty have been restated in order to fit common usage of these words in the seismological community. Anyway, it is a matter of fact that both are managed by using probabilistic arguments and tools. If one considers (as we do) the probability as a measure of the lack of knowledge (i.e. by adopting a general epistemic interpretation of probability), both aleatory variability and epistemic uncertainty are different forms

C2707

of any lack of knowledge about the seismogenic process as a whole. The difference only relies on the different formalization used (aleatory variability is managed within each single PSHA model while the epistemic uncertainty is managed by logic-trees approaches). We have difficulties in discriminating what is the ontological difference between aleatory and epistemic probabilities, except in the case that aleatory variability is considered an inherent feature of the seismic process itself (as in the case of quantum mechanics), but we cannot see any affective physical basis for this last position.

Main editorial comments 1. as better specified in the new text, these approaches are complementary when the aim is combining different PSHA models to obtain a "comprehensive" model taking advantage of different competing models 2. as stated in the text, explicating all the dependencies would make the formula heavier without any improvement of the respective readability 3. To avoid possible misunderstandings the words "(see above)" have been eliminated 4. The statement has been reformulated to be clearer 5. The term "on purpose" has been changed as requested 6. done 7. done 8. no: the "missing" if is just few words before the parenthesis 9. corrected 10. Corrected 11. Corrected

Finally, all the changes to the text are given by a detailed list of changes, and an annotated pdf file. They are comprehensive of all the referees' comments

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 2, 5721, 2014.

C2708