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Comment on **essd-2022-103**

Jana Pazdírková (Referee)

Referee comment on "The European Preinstrumental Earthquake Catalogue EPICA, the 1000–1899 catalogue for the European Seismic Hazard Model 2020" by Andrea Rovida et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2022-103-RC2>, 2022

Review of „The European Preinstrumental Earthquake Catalogue EPICA, the 1000-1899 catalogue for the European Seismic Hazard Model 2020“ by Andrea Rovida, Andrea Antonucci, Mario Locati

I find the submitted article excellent. It describes clearly and in sufficient detail why and how the EPICA catalogue was compiled and what are the differences and improvements compared to the previous SHEEC catalogue. The maps, graphs and tables used complement the text section in a suitable and effective way. All hypertext links in the article are working.

I only noticed a slight inconsistency in the spelling of MEEP/Meep.

I cannot judge the quality of the large dataset in whole because I don't know the details of the situation in other regions. I will focus only on a small part close to me - the Czech Republic and its immediate surroundings. The previous SHEEC catalogue contained only about 50 earthquakes for this low seismicity region, mainly from the German-Czech border area. In the EPICA catalogue, about 50 more earthquakes have been added, mostly taken from Leydecker 2011. Authors had no other choice – at the time of compilation of the catalogue there was no better source. But a few years ago, a revision of earthquakes with foci within and around the Czech Republic began. The first, albeit still very imperfect, result of this revision (Prachař I., Pazdírková J., 2022, Historical Earthquake Database for the Bohemian Massif, <https://doi.org/10.48790/HPAB-H834>) was only made publicly available at the end of April 2022, one month after the EPICA manuscript was submitted. It turns out that some of the events listed in EPICA are false earthquakes, e.g. Iglau 1329, Cheb 1505, Northern Moravia 1786, Riesengebirge 1789, Trutnov 1882 and some others. Similar imperfections are likely to be found in other regions, depending on the level of exploration in particular area, and cannot be completely ruled out. However, this is why it is necessary to create an updated catalogue from time to time to reflect new research results.

I consider the EPICA catalogue a valuable contribution to the understanding of European seismicity.

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