

Interactive comment on “Homogenization of the historical series from the Coimbra Magnetic Observatory, Portugal” by Anna L. Morozova et al.

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I am in the inevitability to recommend some revisions, as this paper has to be re-worked to attain an acceptable level for publication in ESSD. The paper is itself already very lengthy (without considering the SM), the data and the method are not particularly new, but obtaining a long series of magnetic measurements is important. Lots of information are given in the manuscript and they might be better deliver and summarized in forms of Tables. A physical interpretation of the results will bring more interest to this data-driven manuscript.

Specific comments

This manuscript is based on a huge effort to gather magnetic data from Coimbra ob-

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servatory and investigate their quality in order to obtain a consistent long series of data.

The authors propose to homogenize the available magnetic data until 2015. Why not until present day, supposing data are available for mid-2020?

It is not clear how different noise contributions are assessed. For example, the “urban electromagnetic noise level” is noted, but no information about its value and evolution is provided.

The long series of D and/or Y component can be used to investigate the SV behavior and geomagnetic jerks. A comparison with long series of D measurements could be used to show how COI are data in investigating these events. Somehow Figure 1, has to be the last figure of the paper (with all corrections applied). This figure needs after to be discussed in details.

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