

Earth Syst. Sci. Data Discuss., referee comment RC2
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Comment on **essd-2020-375**

Anonymous Referee #2

Referee comment on "The first pan-Alpine surface-gravity database, a modern compilation that crosses frontiers" by Pavol Zahorec et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2020-375-RC2>, 2021

The paper documents the work of the AlpArray Gravity Research Group (AAGR) on the creation of a homogeneous Bouguer and free-air anomaly grid for the Alpine area. This is an important work and warrants publication in the ESSD journal.

However, the paper is just a technical report with a documentation of all details possible with regard to the collected data, but does not include any new and/or innovative topics (besides perhaps the interpretation given at the end of the paper). The paper is fine as a technical report, but should not be published as a paper in a journal. My suggestion is to publish the paper in its present form as a technical report (e.g., within a series maintained by the participating institutions or online) and to re-submit to ESSD a significantly shortened and more concise version of the paper on the main topics and results.

Especially the history and database details on a country by country basis (pages 4 to 15) should be condensed and go to an appendix. Also, the list of abbreviations and other detailed information could go to an appendix. Besides the abovementioned history and database details, the paper is lengthy in almost all sections with too many details, not suited for a paper (e.g. reference systems, digital elevation models, mass corrections, validation, etc.).

Overall, the quality of the paper could be significantly improved by just focusing on the main and most important topics, while leaving out several unnecessary details.