

## Comment on **essd-2021-315**

Gabriel Bowen (Referee)

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Referee comment on "Spatial and seasonal patterns of water isotopes in northeastern German lakes" by Bernhard Aichner et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2021-315-RC1>, 2022

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This is a nice new regional lake water isotope dataset from Germany. I have reviewed the dataset on Pangaea, which looks to be in good shape. The accompanying text and figures are appropriate and for the most part of high quality. I have a few technical/presentation comments that should be addressed prior to acceptance:

- Lines 67-69: please review and follow the guidelines for citing the OIPC: [https://wateriso.utah.edu/waterisotopes/pages/data\\_access/oipc\\_citation.html](https://wateriso.utah.edu/waterisotopes/pages/data_access/oipc_citation.html)
- Line 126: you say measurements were "routinely" checked for organic contamination...please clarify, does this mean they were always checked? If not, under what circumstances were they checked and what is the justification for applying those (presumably favorable) results to the rest of the samples?
- Section 3.2: Please discuss and provide information on the analytical uncertainty. The data files report uncertainties (1 sd) for the individual measurements, but the methods section doesn't explain how these were calculated or what they represent. Are they calculated from the replicate injections of each sample? If so, they give a partial measure of uncertainty but do not reflect batch-to-batch or external calibration uncertainty (which ideally would also be known). The methods section mentions a 'check standard' "M" but doesn't present any results or statistics on the reproducibility of the measurements of that standard...reporting this information would be useful in providing a broader metric of uncertainty.
- Lines 174-175: Please review the wording of this sentence, there is a word missing or out of place here.
- Figure 1: I would be helpful to provide either lat/lon ticks on the axes of this map or an inset showing the broader geographic context (e.g., outline of Germany or N Europe showing the study location) to help orient the reader.