

Interactive comment on “Annually resolved $\delta^2\text{H}$ tree-ring chronology of the lignin methoxyl groups from Germany reflects averaged Western European surface air temperature changes” by Tobias Anhäuser et al.

Anonymous Referee #1

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This paper investigated the potential of using stable hydrogen isotopes ratios of lignin methoxyl groups to reconstruct large-scale temperature anomalies from the year 1916 to 2015. In my view, there are methodological problems. In particular, robustness of the relationship on which the reconstruction is based. The relationship between the tree-ring $\delta^2\text{HLM}$ and surface air temperature seems non-linear through time, which discard the possibility of any reconstruction. In addition, I found it difficult to see the originality of the paper and some results are redundant compared to Anhäuser et al 2017 “Stable hydrogen isotope values of lignin methoxyl groups of

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four tree species across Germany and their implication for temperature reconstruction”.

Please also note the supplement to this comment:

<https://www.clim-past-discuss.net/cp-2019-8/cp-2019-8-RC1-supplement.pdf>

Interactive comment on Clim. Past Discuss., <https://doi.org/10.5194/cp-2019-8>, 2019.

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