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Climate of the Past Discussions

Interactive comment on "Stable isotopes in cave ice suggest summer temperatures in East-Central Europe are linked to AMO variability" *by* Carmen-Andreea Bădălută et al.

Anonymous Referee #2

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General comments I've read carefully the paper titled "Stable isotopes in cave ice suggest summer temperatures in East-Central Europe are linked to AMO variability" by Carmen-Andreea BădăluÈŻă et al. This is an interesting one showing evidence of possible links between summer temperatures and solar activity as well as with a well known climate index called Atlantic Multidecadal Oscillation (AMO). Conclusions suggest also that LIA might be a more winter-related event in the East-Central-Europe Region. The manuscript is well written and data are exhaustive and of sufficiently good quality. Results are well presented and discussion and conclusions consistent. For all this reasons I recommend this manuscript for publication in CP with some minor modifications. English is not always fluent, even if generally well understandable, I only

suggest a quick polished by an English native before the final submission. Besides comments directly highlighted in the corrected pdf, I have only one point that in my opinion could/should be better addressed. What is missing is a wider discussion comparing other results recently obtained in ice cave core campaigns conducted in other regions of Europe. For instance, a very recent and interesting paper by Sancho et al. 2018 "Middle-to-late Holocene palaeoenvironmental reconstruction from the A294 ice-cave record (Central Pyrenees, northern Spain)" gives interesting results in highlighting a link with NAO in this area. Do you think there could be or there is also a link with the NAO in the ice accretion of this cave ? The paper would benefit in terms of interest for a wider audience if comparison with other studies will be presented from ice cave coring programs. ... The ice cave community is not so big and thus not many papers dealing with such evidence exist. It wouldn't be a huge effort to discuss other results in this field, but a great improvement to the paper with a small commitment

Other minor comments P1 L31 – I would say that temperature and precipitation are of course important, but specifically the ones we have for the longest period... other parameters would be important as well, but we don't possess long records P2 L15-20 Here the authors already give conclusions... I would prefer to read here the goals of this work and find the conclusions at the end of the manuscript P4 L 30 Precipitation and not Precipitations P4 L37 it is "now", "low"or "no" winter accumulation ? I guess it is "low", in such a way the sentence is reasonable

Figures Figure 1a - letters and font are too small, impossible to read them... omit "Mts" for the mountan chains which is unuseful

Figure 5 legend of scale is missing

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