

This document contains editor comments to the revised version of bg-2021-231: ‘Comment on "Estimating causal networks in biosphere–atmosphere interaction with the PCMCI approach"' and author responses to these comments. Editor comments are presented as indented text.

### **Editor comments**

many thanks for your revised manuscript, and my apologies for getting back to you with a delay. I find that your manuscript has been improved given the suggestions by the reviewers. However, I think that the current manuscript contains too much jargon and unexplained/referenced acronyms, to make the content accessible to the general readership of Biogeosciences. One, but not the only example for this is "The CSD methods we have used are PC-Stable with two significance levels 0.1 and 0.01, GES, and ICA-based LiNGAM.", where neither PC-Stable nor ICA-based LiNGAM are explained. Please try to reformulate to make this accessible to non-specialist scientific readers.

We have now reworked parts of the manuscript for this end. In the beginning of main text we have added explanation about the PCMCI algorithm. Model score is now defined in the “numbered list” (workflow presentation). The algorithm acronyms are also now explicitly stated with references and we have added a paragraph detailing what are the fundamental differences between these approaches. Additionally Fig. 3 has been modified and panel captions removed.

The revised version deals better with the conference paper issue and the remaining issue from Kirch et al. 2020, however, this also means that the title "Comment on: ... " is not that appropriate anymore. I would suggest to use the technical note category of Biogeosciences instead, with a slightly modified title, and a slight alternation of the beginning of the Abstract. It is fine to start by stating that you provide a perspective of the Krich study.

The title has now been changed to “Technical note: incorporating expert domain knowledge into causal structure discovery workflows” and the beginning of the abstract modified. Some minor additional modifications have been made – the manuscript is now referred to as a “brief” or “note”.