Clim. Past Discuss.,
https://doi.org/10.5194/cp-2017-33-AC2, 2017
© Author(s) 2017. This work is distributed under
the Creative Commons Attribution 3.0 License.

Climate of the Past Discussions

Interactive comment on "Climate variability in subarctic area for the last two millennia" *by* Marie Nicolle et al.

Marie Nicolle et al.

nicollemarie@hotmail.fr

Received and published: 19 June 2017

I would like to thank the Anonymous Reviewer #3 for their comments and suggestions on the submitted manuscript. Here, I would like to respond and provide additional details on the Reviewer #3 comments.

The Anonymous Reviewer #3 note that the description of the Mann-Kendall, LOESS filtering, and wavelet analysis is not necessary for the manuscript. To reduce the "Methods" part, we propose to include it part in several Appendix at the end of the manuscript.

In the new version of the manuscript, the chapter "Secular variability" will be modified. The description of the cold period of the LIA will be developed with the addition of a paragraph on the different ways to characterize the LIA in the Arctic area. The same

Printer-friendly version

Discussion paper

synthesis will be made for the warm period of the MCA, with the update of the Fig. 4. The aims of these part are not the definition of forcings that can cause these two major climatic periods and we will focus on the description of the temporal and spatial variability expression of the two periods.

The most important result of our study is the highlighting of variabilities occurring at multidecadal scales record in paleoclimate data and linked to regional internal climate variability observed in instrumental data. So in the update version of the manuscript, the part about the link between climatic oscillation (AMO and PDO) and the proxy data will be developed. Especially, a new figure will be added and presents the similarity between the trends of the AMO index and the sea-ice cover to describe the interaction between internal climate variability, sea-ice cover fluctuations and climate variability recorded in our regional mean records. Because one of the main objectives of the paper is to determine the ability of the Arctic 2k database series to reproduce climate variability recorded in the observations data, we do not use the non-instrumental AMO and PDO records to go farther back in time.

Interactive comment on Clim. Past Discuss., https://doi.org/10.5194/cp-2017-33, 2017.

Printer-friendly version

Discussion paper

CC BY