We thank the reviewer for the comments and suggestions. Our response is detailed below (in black), below the corresponding comments (in blue)

The study focuses on the boreal winter season in Eurasia during the 4.2 cal BP event, where climate variability is a function of the spatio-temporal dynamics of the westerly winds. The authors present a multi-proxy reconstruction of winter climate conditions in Europe, west Asia and northern Africa between 4.3 and 3.8 ka BP. The authors hypothesise that in the extratropical Northern Hemisphere, the 4.2 ka BP event was caused by the strengthening and expansion of the Siberian High, which effectively blocked the moisture-carrying westerlies from reaching W Asia, and enhanced outbreaks of cold and dry winds in that region. The authors further hypothesise that in extratropical regions of Eurasia the 4.2 ka BP event was a century-scale winter phenomenon, whereas in the monsoon-dominated regions it may have been a feature of summer climate conditions.
Generally, the introduction is well written, the aim and hypothesis of the current study are clear.
Methodological approach: the method chapter clearly documents the methodological steps and criteria.
Results and discussion: the authors create a convincing concept for the large-scale atmospheric conditions around 4.2 cal ka BP. I like the deduction of probable negative NAO-like conditions at 4.2 cal ka BP although the Olsen record (Olsen et al. 2012) does not indicate a clear negative NAO-like stage at that time.
Overall, the manuscript is well organised and I recommend publication in Climate of the Past with minor revisions.
Thank you for the appreciations.
On NAO- conditions at 4.2 ka cal BP: In Olsen et al. (2012), a short-lived excursion towards negative NAO conditions at ~4250 cal BP is shown in figure 3, interrupting a very long period of NAO+ conditions.

Detailed comments: Line 15: delete "using“
Done.

Line 22: What do you mean exactly with “antiphase behaviour”?
We mean a strengthening of the winter monsoon occurring synchronously with a weakening of the summer (Kang et al., 2018). Strong and dry winter monsoon would result in drought, as would do weak summer monsoons. It is true that without such an explication the question of “antiphase behavior” remains. We have thus deleted the word “behavior” from the abstract and kept in the main text (Lines 285-287) where we have clarified this “behavior” and included the above-mentioned reference.

Line 34: This is not clear for the Western Mediterranean. There are also indications for wet conditions at 4.2 cal ka BP in the W Mediterranean (e.g. Fletcher et al. 2013).
True. We have used the wetter conditions in the western Mediterranean region to support our hypothesis of prevailing NAO- conditions. We have changed the text to reflect this, as follows: “These studies have defined the spatial extent and variability of the event. Megadrought developed abruptly at ca. 4.2 ka cal BP across North America, Andean South America, the Mediterranean basin from Spain to Turkey (except for several records from N Morocco and S Spain which indicate wetter conditions), Iran, India, Tibet, and north China and Australia […].”

Line 90: “Our analysis has shown that the results are not sensitive to the exact threshold value used for our composite analysis”. What does it mean? Explain the consequences for your data interpretation.
In the manuscript we choose for the composite map analysis the years when the SH index was greater (HIGH) and lower (LOW) than a value of one standard deviation. This is an arbitrary threshold (the state of the art threshold in climatology), but if we vary the threshold (e.g., 0.5 standard deviation or 1.5 standard deviation) the spatial structure and the significance of the composite maps remains the same. This was meant by the statement: “Our analysis has shown that the results are not sensitive to the exact threshold value used for our composite analysis”. We have changed the text to make this clear, as follows:
Our analysis has shown that the results are not sensitive to the exact threshold value used for our composite analysis (i.e., varying the standard deviation between 0.5 and 1.5).

Additional reference:
Kang, S., Wang, X., Roberts, H. M., Duller, G. A. T., Cheng, P., Lu, Y., and An, Z.: Late Holocene anti-phase change in the East Asian summer and winter monsoons, Quat. Sci. Rev., 188, 28-36, 2018.