

Reply to Reviewer 3

The paper contains relevant information to evaluate the exceptional 1740 cold event.

It is well written and it is presented in a well-structured way, with valid scientific approach and applied methods.

It is interesting the analog pressure reconstruction to investigate the potential pressure systems that lead to the cold flow over central Europe. This strongly helps in interpreting climate anomalies in light of atmospheric circulation.

The investigation is rigorous in exploiting all the available information recovered (both at daily and longer time resolutions) and the final discussion is honestly presented, clearly underlining what robustly emerges from the analyses and giving a marginal role to purely speculative interpretations.

Please, consider that in Camuffo et al. (2017a, 2019, 2020, 2024) new versions (with respect to the Camuffo and Jones 2002 mentioned in the paper) of daily temperature and precipitation series for Bologna and Padua are presented.

Thanks –we will check the versions of our data and update the data and references accordingly.

Evaluate to mention that important frozen events occurred in the Venice lagoon in 1740, as documented by Gallicciolli: from Memorie Veneziane antiche profane ed ecclesiastiche of 1795 by Gallicciolli GB we read “The 6th January 1708 [More Veneto] the horrible cold started. The Lagoons were frozen over for about 18 days. Food supply was made with carriages. Similarly, in 1740, 1758 and 1788.” (see Camuffo et al., 1987, 2017b). NOTE: Pay attention to “more veneto” dating (it means “according to Venetian custom”, a kind of dating of the old Republic of Venice): February was the last month of the year and March the first of the new year, so that 20 February 1708 more veneto should be converted into 20 February 1709 in the Gregorian style, while 3 March 1709 more veneto remains 3 March 1709.

Thanks, this will be mentioned both in the introduction and in the Discussion (comparison with other winters)

MINOR COMMENTS:

Pag. 3, line 86: May-Oct should be Oct-May.

Thanks

Figure 9. In the caption May-Oct should be Oct-May

Thanks

Bibliography

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