

Clim. Past Discuss., author comment AC1  
<https://doi.org/10.5194/cp-2021-179-AC1>, 2022  
© Author(s) 2022. This work is distributed under  
the Creative Commons Attribution 4.0 License.

## Reply on CC1

Thomas Pliemon et al.

---

Author comment on "Subdaily meteorological measurements of temperature, direction of the movement of the clouds, and cloud cover in the Late Maunder Minimum by Louis Morin in Paris" by Thomas Pliemon et al., Clim. Past Discuss.,  
<https://doi.org/10.5194/cp-2021-179-AC1>, 2022

---

Thanks for the comment, which raises an important point. We think that it is difficult to use terms that are defined by climatology. The period we are studying lies in the Little Ice Age (1300–1850), which, however, stretches over centuries and is also subject to some degree of criticism. Subperiods in the Little Ice Age, which are defined by climatic parameters, do not exist. The reason is obvious because a definition with climate-relevant parameters is difficult. Cold periods and warm periods are heterogeneous in terms of locality and temporal occurrence as well as influenced by many factors. I.e. a temporal limitation is difficult. Thus, there is another possibility to borrow or include a term from another discipline. Strictly speaking, even using the term Middle Ages would be a borrowed term, since it is not defined by climatic parameters in beginning and end. What we want is simply to use a term that is known in our discipline and allows a quick attribution for the reader. We want to use this term neutrally with respect to climate-relevant parameters and will also correct the paper where it could lead to misunderstandings, as well as state this explicitly. So, we want to keep the term and show by the following list of publications that this term is already established.

Alcoforado, M.-J., M. de Fátima Nunes, J. C. Garcia, and J. P. Taborda, 2000: Temperature and precipitation reconstruction in southern Portugal during the Late Maunder Minimum (AD 1675–1715). *Holocene*, 10, 333–340,  
<https://doi.org/10.1191/095968300674442959>.

Barriendos M. Climatic variations in the Iberian Peninsula during the late Maunder Minimum (AD 1675–1715): an analysis of data from rogation ceremonies. *The Holocene*. 1997;7(1):105–111. doi:10.1177/095968369700700110

Barriopedro, D., Gallego, D., Alvarez-Castro, M.C. et al. Witnessing North Atlantic westerlies variability from ships' logbooks (1685–2008). *Clim Dyn* 43, 939–955 (2014).  
<https://doi.org/10.1007/s00382-013-1957-8>

Luterbacher, J., Rickli, R., Tinguely, C., Xoplaki, E., Schüpbach, E., Dietrich, D., Hüsler, J., Ambühl, M., Pfister, C., Beeli, P., Dietrich, U., Dannecker, A., Davies, T., Jones, P., Slonosky, V., Ogilvie, A., Maheras, P., Kolyva-Machera, F., Martin-Vide, J., Barriendos, M.,

Alcoforado, M., Nunes, M., Jónsson, T., Glaser, R., Jacobeit, J., Beck, C., Philipp, A., Beyer, U., Kaas, E., Schmith, T., Barring, L., Jönsson, P., Rácz, L. and Wanner, H. (2000), Monthly mean pressure reconstruction for the Late Maunder Minimum Period (AD 1675–1715). *Int. J. Climatol.*, 20: 1049–1066.  
[https://doi.org/10.1002/1097-0088\(200008\)20:10<1049::AID-JOC521>3.0.CO;2-6](https://doi.org/10.1002/1097-0088(200008)20:10<1049::AID-JOC521>3.0.CO;2-6)

Luterbacher, J., Rickli, R., Xoplaki, E. et al. The Late Maunder Minimum (1675–1715) – A Key Period for Studying Decadal Scale Climatic Change in Europe. *Climatic Change* 49, 441–462 (2001). <https://doi.org/10.1023/A:1010667524422>

Mellado-Cano, J., Barriopedro, D., García-Herrera, R., Trigo, R. M., & Álvarez-Castro, M. C. (2018). Euro-Atlantic Atmospheric Circulation during the Late Maunder Minimum, *Journal of Climate*, 31(10), 3849–3863. Retrieved Mar 16, 2022, from <https://journals.ametsoc.org/view/journals/clim/31/10/jcli-d-17-0261.1.xml>

Niedzwiedz, T., 2010: Summer temperatures in the Tatra Mountains during the Maunder Minimum (1645–1715). The Polish Climate in the European Context: An Historical Overview, R. Przybylak et al., Eds., Springer, 397–406,  
<https://doi.org/10.1007/978-90-481-3167-9>.

Rácz, L., 1994: The climate of Hungary during the Late Maunder Minimum (1675–1715). Climatic Trends and Anomalies in Europe 1675–1715, B. Frenzel, C. Pfister, and B. Gläser, Eds., G. Fischer, 43–50.

Wanner H, Pfister C, Brażdil R, Frich P, Frydendahl K, Jónsson T, Kington J, Lamb HH, Rosenørn S, Wishman E (1995) Wintertime European circulation patterns during the Late Maunder Minimum cooling period (1675–1704). *Theoret Appl Climatol* 51:167–175.  
doi:10.1007/BF00867443

Xoplaki, E., P. Maheras, and J. Luterbacher, 2001: Variability of climate in meridional Balkans during the periods 1675–1715 and 1780–1830 and its impact on human life. *Climatic Change*, 48, 581–615, <https://doi.org/10.1023/A:1005616424463>.

Zinke, J. , Dullo, C. , von Storch, H. , Müller, B. , Zorita, E. , Rein, B. , Mieding, B. , Miller, H. , Lücke, A. , Schleser, G. , Schwab, M. , Negendank, J. , Kienel, U. , Ruoco, G. and Eisenhauer, A. (2004): Evidence for the climate during the Late Maunder Minimum from proxy data available within KIHZ , The climate in historical times : towards a synthesis of holocene proxy data and climate models / [GKSS-Forschungszentrum]. Hubertus Fischer ... (eds.) Berlin [u.a.] : Springer, S. 397-414 (GKSS School of Environmental Research), ISBN: 3-540-20601-9 .

Zorita, E., Von Storch, H., Gonzalez-Rouco, F. J., Cubasch, U., Luterbacher, J., Legutke, S., et al. (2004). Climate evolution in the last five centuries simulated by an atmosphere-ocean model: global temperatures, the North Atlantic Oscillation and the Late Maunder Minimum. *Meteorologische Zeitschrift*, 13(4), 271–289.

Furthermore, we will change the above-mentioned citation, which was actually not quoted correctly by us.