

Comment on cp-2021-179 - The 'late Maunder minimum' is not a period of climate

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Community 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-CC1>, 2022

The 'late Maunder minimum' is not a period of climate

I strongly suggest that the authors reconsider their use of the term "late Maunder Minimum" as a name describing a period of climate.

The 'Maunder minimum' is a term first coined by J.A. Eddy, [1] to describe the period in which the Sun had a prolonged sunspot minimum, first noticed by E.W. Maunder in the 1890's. The Maunder Minimum is now generally used to describe the period of very low observed sunspot numbers between 1640 and 1720.

The 'Maunder minimum' it is not a climatic term, and it is extremely misleading to use it as such. To do so suggests an a-prior belief that any climate changes observed are due to lower solar activity.

The authors say that the the "late Maunder Minimum" could be due to a number of different factors, (lines 352-357 and 429-432), including sunspots, volcanic activity and ocean heat transport. I am sure the authors did not mean to imply that volcanoes and the ocean influence the Sun, but this demonstrates the confusion that can be caused by using an astronomical term for solar activity as a description for a period of climate.

The authors state that "Lockwood et al. (2017) find that several factors are responsible for explaining the cold in the LMM." (line 352). This is not correct. Lockwood (2017) [2] does not use the term 'LMM'/'Late Maunder minimum'. Neither does the study use 'Maunder minimum' as a term to describe a period of cool climate.

The term 'Late Maunder minimum' has been used incorrectly in a few published climate studies (referenced by the authors), but that should not be used as a precedent for its continued incorrect use.

If the authors need a name for the climate period 1675 to 1715, they should consider creating a neutral name that does not imply a cause or exaggerate

the climatic conditions at the time.

[1] Eddy, J.A., The Maunder Minimum, Science, 1976

[2] Lockwood, Owens, Hawkins, Jones and Usoskin, Frost fairs, sunspots and the Little Ice Age, Astronomy and geophysics, 2017