

## ***Interactive comment on “Did the Roman Empire affect European climate? A new look at the effects of land use and anthropogenic aerosol emissions” by Anina Gilgen et al.***

### **Anonymous Referee #1**

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It was a pleasure to read the paper entitled “Did the Roman Empire affect European climate? A new look at the effects of land use and anthropogenic aerosol emissions”.

The paper focuses on the impact of the Ancient Romans around 100 AD. This period corresponds to the maximum expansion of the Roman empire, under the Emperor Traiano, and was considered by the authors as representative of a potential past anthropogenic impact on the climate system. The authors evaluate the anthropogenic effect of land use and aerosol emissions.

In my view, the paper is really well written, properly structured and easy to read.

The authors properly discussed the assumptions introduced that provided the uncer-

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tainties in the model.

Perhaps, a more detailed archaeological discussion would further increase the quality of this paper. I was wondering, for example, what is the potential influence of Roman battles in your model, where thousands of people moved in Europe (e.g. during the Dacian War), burned villages, re-worked metals and so on. This impact should be intense, and maybe influenced significantly the population size and distribution in short times. In my view, the paper meets the standards of this journal and I have nothing against its publication in cp.

Please correct Pompeji (it sounds German to me) (p.7 L. 28).

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Interactive comment on Clim. Past Discuss., <https://doi.org/10.5194/cp-2019-56>, 2019.