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Atmospheric Chemistry and Physics Discussions



# *Interactive comment on* "Atmospheric effects of volcanic eruptions as seen by famous artists and depicted in their paintings" *by* C. S. Zerefos et al.

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This comment on the highly imaginative work by Zerefos et al. is to be seen as an "educated layman's" opinion since I am not an expert in the use of the applied radiative transfer tool. Any of the more technical aspects were, in my opinion, very adequately covered by the comments of B. Mayer.

I see the main value of the work in the first ever objective analysis of pieces of art for scientific purposes. It seems to me that the authors did a tremendous work extracting suitable paintings and reducing the risk of miss-interpretation. It is clear that such kind of pioneer work cannot lead to 100% coverage of the last 500 years of volcanic activity since there are always problems with dating etc. However, already comparing the results from their work with recent estimates of stratospheric aerosol load due to



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some well known volcanic eruptions based on volcanology and atmospheric science is very helpful since it gives a clear constraint on maximum loading. This way the authors discovered another, completely independent source of information that helps narrowing the error bar. In future studies it might be of interest to study if there are differences in the reflections of sky colour by artists based at different latitudes that might develop from eruptions in high and low latitudes. It might be also worth considering the aerosol properties (size distribution, single scattering albedo etc.) and how they will change red/green values. So far obviously only one fix set of these properties was used together with a range of optical depths.

There is only one mistake that catched my eyes: The famous German romantic painter is Caspar David Friedrich, not Friedrich Caspar David!

Otherwise, congratulations to the authors of a stimulating and not mainstream paper that I wish to be published (nearly) as is.

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