

## ***Interactive comment on “Impact of the eruption of Mt. Pinatubo on the chemical composition of the stratosphere” by Markus Kilian et al.***

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Received and published: 25 May 2020

Dear authors,

this short comment is mainly concerned with the simulated volcanic heating which you stated to be of 3.5-4 K between 50-60 hPa in VOL agreeing well with results from Labitzke and McCormick (1992), who observed a stratospheric heating at 50 hPa of 3-4.5 K in the tropics. Angell (1997a), who used radiosonde data, figured out a temperature increase of approximately 3-4 K between 30-50 hPa in late 1991. However, more recent studies (Revell et al, 2017; see Fig. 4 in Kuchar et al, 2017) showed that simulations using the CCMI aerosol data set overestimate the temperature response to the Mt Pinatubo eruption and novel

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CMIP6 stratospheric aerosol data are in excellent agreement with MERRA and ERA-Interim reanalyses. Whether you want to compare your results with these studies, model simulation datasets are available via British Atmospheric Data Centre; see <http://catalogue.ceda.ac.uk/uuid/1005d2c25d14483aa66a5f4a7f50fcf0> or at <https://data.mendeley.com/datasets/khrhbw6wn5/1> (Kuchar and Revell, 2017).

Please consider these facts in the discussion of your results.

Best regards

Ales Kuchar

References

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