

Atmos. Chem. Phys. Discuss., author comment AC1
<https://doi.org/10.5194/acp-2021-654-AC1>, 2021
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Comment on acp-2021-654

Jennifer Schallock et al.

Author comment on "Reconstructing volcanic radiative forcing since 1990, using a comprehensive emission inventory and spatially resolved sulfur injections from satellite data in a chemistry-climate model" by Jennifer Schallock et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2021-654-AC1>, 2021

Short reply to the referees

We thank the referees for their constructive suggestions. The SO₂-inventory will be available soon at the WDCC-CERA-database at DKRZ in Hamburg, Germany in form of netcdf and Fortran-readable ascii files, similar to the previous version provided for ISA-MIP in the framework of SSIRC (https://doi.org/10.1594/WDCC/SSIRC_1). This will also include the radiative forcing by stratospheric aerosol as calculated by EMAC (as netcdf, Figure 10).

ISA-MIP and GLOSSAC will be addressed in the introduction. For some reason, this discussion was lost in the submitted version which was published without any corrections during the access phase. We also noticed some typos in the volcano-table which could not be corrected. We apologize for this.

We will provide more details how SO₂ is derived from the different data sets. We will also present in the Appendix some examples of cross validation for SO₂ estimates for eruptions where all or at least 3 satellite instruments were available, as suggested by referee 1.

More detailed replies will follow soon.