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Impact of SO_2 injection profiles on simulated volcanic forcing for the 2009 Sarychev eruptions – investigating the importance of using high-vertical-resolution methods when compiling SO_2 data

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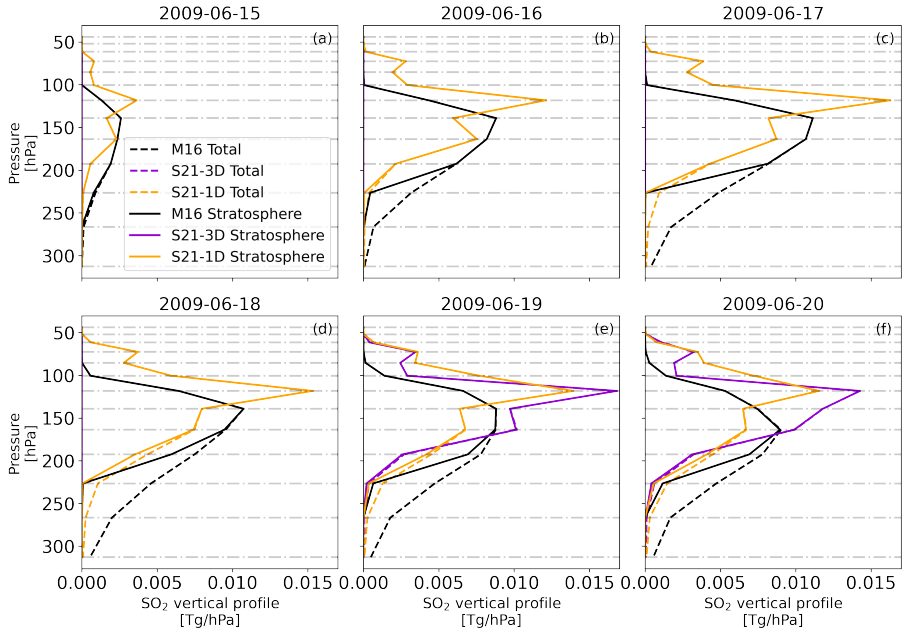

Figure S1. Vertical profile for for the global total volcanic SO_2 during the first 6 days after the eruption. The dashed lines represent the total amount of volcanic SO_2 in the atmosphere whereas the solid lines represent the total amount of volcanic SO_2 in the stratosphere. The gray dashed-dotted lines represent the model pressure levels. To isolate the volcanic SO_2 we have subtracted the SO_2 levels in the No-Volc simulation from the other 3 simulations.

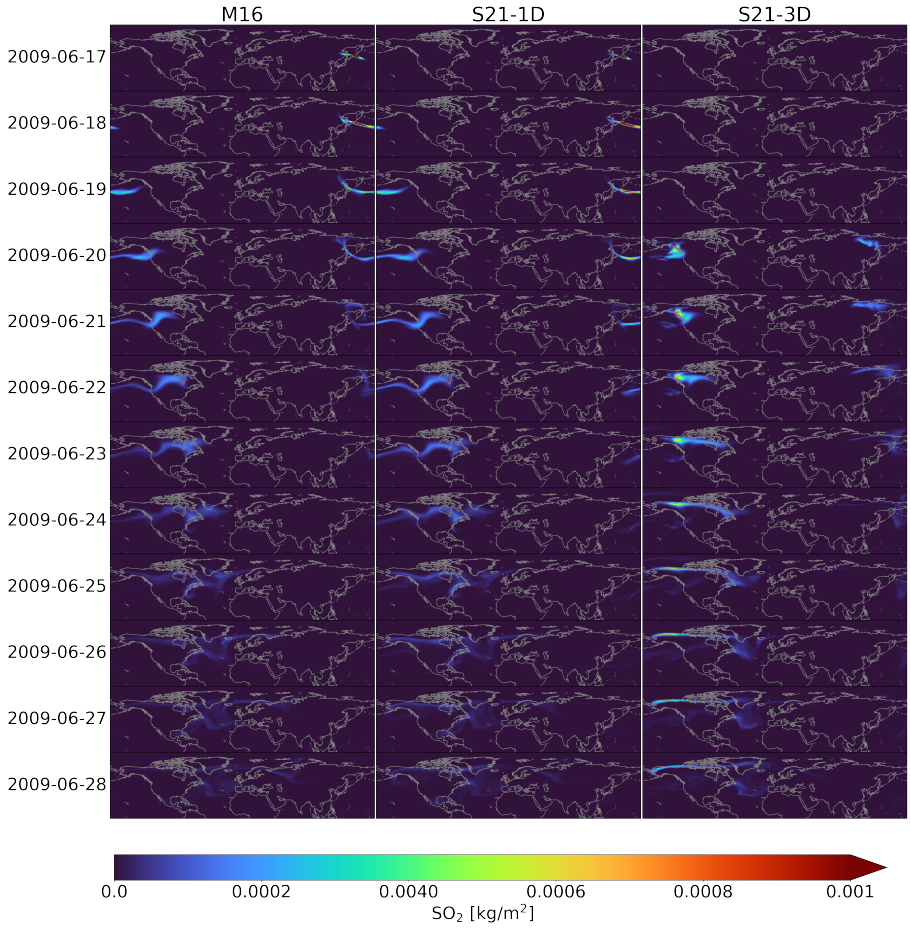

Figure S2. Daily averaged SO_2 column values for the M16, S21-3D and S21-1D simulations. Displayed are the values from the 12 days following the Sarychev 2009 eruption for the northern hemisphere. To isolate the volcanic SO_2 we have subtracted the SO_2 levels in the No-Volc simulation from the other 3 simulations.