

## Supplementary Table

Parameters ↓ // Simulations ⇒	wo_ODMS	CTRL	2X_ODMS
<b>SO<sub>2</sub> (Tg)</b>	0.0645	0.1407	0.2545
<b>H<sub>2</sub>SO<sub>4</sub> (Tg)</b>	$2.0 \cdot 10^{-4}$	$4.38 \cdot 10^{-4}$	$5.61 \cdot 10^{-4}$
<b>Num_act (1/m<sup>3</sup>)</b>	$1.24 \cdot 10^9$	$2.69 \cdot 10^9$	$3.47 \cdot 10^9$
<b>AOD</b>	0.136	0.167	0.201

**Table 1.** Absolute values (DJF mean) (a) SO<sub>2</sub> column burden (b) H<sub>2</sub>SO<sub>4</sub> column burden (c) vertically integrated number of activated particles (Num\_act) and (d) aerosol optical depth (AOD) at 0.55 μm over 30S-75S in wo\_ODMS, CTRL and 2X\_ODMS simulations.