## Effects of forcing differences and initial conditions on inter-model agreement in the VolMIP volc-pinatubo-full experiment

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## **Supplementary information**



35 Figure S1 - Stratospheric aerosol optical depth for the Pinatubo period (1990-1996). Time-latitude evolution of monthly zonal-mean stratospheric aerosol optical depth (SAOD) at 550 nm from versions v3 and v4 of the CMIP6 volcanic forcing dataset (Luo, 2018a,b), and their differences.



Figure S2: same as Figure 4, left panels (full sky), but for the short-wave (SW) radiation only.



Figure S3: same as Figure 4, left panels (full-sky), but for the long-wave (LW) radiation only.



45 Figure S4: same as Figure 5, but for the short-wave (SW) radiation only.



Figure S5: same as Figure 5, but for the long-wave (LW) radiation only.



Figure S6: same as Figure 7, but for paired anomalies



Figure S7: same as Figure 8, but for paired anomalies



Figure S8: same as Figure 9, but for anomalies to the climatology of the piControl chunks corresponding to the volc-pinatubo-full simulations.





Figure S9: same as Figure 11, but for the paired anomalies of the second post-eruption boreal summer (1992 JJA).