

Enhancing Climate Model Performance through Improving Volcanic Aerosol Representation

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Supplement Materials

Table S1. Correlation between observed and simulated surface temperature.

	1940-1959	1960-1980	1940-1980
V2	0.15	0.32	0.30
V2-IVA	0.38	0.40	0.38

Table S2. Same as Table 4 but for comparison between V2-IVA and V2-IVA-NPI.

V2-IVA - V2-IVA-NPI	1940-1959	1960-1979
Net Cloud Forcing (W/m ²)	0.099 (-0.611, -0.710)	0.016 (-0.985, -1.001)
Low Cloud Fraction (%)	-0.133 (0.131, 0.265)	-0.032 (0.369, 0.401)
Cloud Liquid Water Path (kg/m ²)	-9.65 E-05 (9.73E-4, 1.07E-3)	-1.03E-4 (1.48E-3, 1.58E-3)
Surface T (°K)	0.089 (0.004, -0.084)	0.052 (-0.190, -0.242)