

Volcanic Aerosols, Radiative Forcing and Climate Perturbations

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Aerosols in the stratosphere in the aftermath of tropical eruptions cause a significant radiative forcing of climate. The manner in which the stratosphere and troposphere are perturbed, and the response of the Earth's climate to these perturbations have been investigated on a reasonably successful basis using three-dimensional models. We will in particular focus on the state-of-the-art in the modeling of the climate effects, the confidence with which the processes and impacts are understood by comparing with observations, and the challenging issues that remain to be explored further.