



Radiative effects of Pinatubo and recent medium volcanic eruptions using the CCM EMAC and satellite data

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The CCM EMAC with modal aerosol scheme for troposphere and stratosphere is used to calculate radiative forcing and local heating by stratospheric aerosol from volcanic SO₂ injections in the framework of SPARC-SSIRC. Injected SO₂ is estimated from SAGE and MIPAS satellite data and entered into the model as 3D-plume. We take into account feedback to dynamics, like lofting, and chemical feedbacks via ozone, water vapor and OH. Simulated forcing and extinction are compared with estimates from satellite data like ERBE, GOMOS and others. We present results with and without nudging to observed tropospheric meteorology and uncertainty studies related to gaps in the satellite data.