

x 1000 Monte Carlo simulations

Volcanic SO₂ emission parameters *
(height, mass, and latitude of SO₂ injection)

Inputs / Outputs

EVA_H (volcanic aerosol
model, *Aubry et al., 2020*)

EVA_H parameters *
(e.g. aerosol loss timescale)

Models

Stratospheric aerosol optical depth
(SAOD)

Model parameters

* Sampled parameters
within uncertainties

SAOD-ERF scaling
(*Marshall et al., 2020*)

Scaling factor *

Internal climate
variability *

GHG
concentrations

Volcanic effective
radiative forcing (ERF)

Solar, orbital, ice sheets
and land-use forcing

FaIR (simple climate model,
Leach et al., 2021)

FaIR parameters *
(e.g. heat capacity)

Temperature anomaly