Beyond eruptive scenarios: assessing tephra fallout hazard from Neapolitan volcanoes

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Supplementary Online Information

Table S1

Eruption Size	σ_f $(\Phi - units)$	σ_c $(\Phi - units)$	p	ψ	A
Small					
SV	1.7	1.5	0.5	Uniform on [0.90. 0.94]	Beta on [2.5 ; 4.5]
CF	1.19	1.19	0.2	Uniform on [0.90. 0.94]	Beta on [2.5 ; 4.5]
Medium					
SV	2.3	1.5	0.75	Uniform on [0.90. 0.94]	Beta on [3.0 ; 4.5]
CF	1.54	1.54	0.3	Uniform on [0.90. 0.94]	Beta on [3.0 ; 4.5]
Large					
SV	2.3	1.5	0.75	Uniform on [0.90. 0.94]	Beta on [3.5 ; 4.5]
CF	1.38	1.38	0.4	Uniform on [0.90. 0.94]	Beta on [3.5 ; 4.5]

TABLE S1: Input parameters to numerical models HAZMAP and FALL3D for simulating tephra transport and dispersal with the new method. SV is Somma-Vesuvius, CF is Campi Flegrei. σ_c and σ_f refer to the standard deviation of the Normal distributions associated to the total grain size distribution, respectively for coarse and fine particles. The parameter p is the relative weight of the coarse particles in the total grain size distribution. The parameter ψ is the particle sphericity, assuming a symmetrical beta distribution. The parameter A is Suzuki (1983) column shape parameter.

Suzuki, T., 1983. A theoretical model for dispersion of tephra. In: Shimozuru, D., Yokoyama, I. (Eds.), Arc Volcanism: Physics and Tectonics. Terra Scientific Publish- ing Company (TERRAPUB), Tokyo, pp. 93113.