

Chapter 9

Additional Figures

Figure OS9.1. Relationship between mass eruption rate (kg s^{-1}) and total plume height (km), derived for temperate climates using the model of Sparks (1986). Result for Etna 1998 is indicated with the red circle for a total plume height of 9 km and eruption temperature of 1000 °C (after Sparks 1986).

Figure OS9.2. Etna 22 July 1998 airborne ash concentration at 1500 m a.s.l. at different time slices, derived using the model FALL3D, from 17:00 to 20:00h UTC. The contour levels indicate concentrations of 10^{-4} , 10^{-5} and $10^{-6} \text{ kg m}^{-3}$ (after Folch *et al.*, 2009).

Figure OS9.3. Simulation of the temporal evolution of the Etna 1998 deposit obtained using Fall3D model coupled with the WRF meteorological model (animated GIF file).

Figure OS9.4. Plume associated with the 3 November 2002 eruption of Reventador volcano (Ecuador). Photo by G. Eguiguren.

Figure OS9.5. Aerial photograph taken of volcanic ash from the 3 November 2002 eruption of Reventador covering surfaces at Mariscal Sucre International Airport in Quito. The airport was closed for 8 days as a result of 3–5 mm of ash deposition on planes and runways (from Guffanti *et al.*, 2008). Photo by Hugo Yepes, Geophysical Institute of Ecuador.

Figure OS9.6. Reventador ash over Quito on 3 November 2002
(<http://commons.wikimedia.org/wiki/File:Erupcion-reventador-quito-2002-001.JPG>)

Figure OS9.7. March 1944 eruption of Vesuvius, Italy: (a) and (b) volcanic plume; (c) and (d) damage to American airplanes; (e) and (f) ash removal.

Figure OS9.8. Weak plume associated with the 2010 eruption of Eyjafjallajökull volcano, Iceland, and ash deposited on vegetation. Photo by C. Bonadonna (4 May 2010).

Figure OS9.9. Ash deposited on cars ~25 km SE of the volcano (2010 eruption of Eyjafjallajökull volcano, Iceland). Photo by C. Bonadonna (7 May 2010).

Figure OS9.10. Ash deposited ~70 km (Lago Espolon) from Chaiten volcano, Chile, as a result of the May 2008 eruption. Photo by C. Bonadonna (23 January 2009)

Figure OS9.11. Ash deposited on plants in Pumalin Park, Sendero Michimauida, ~10 km from Chaiten volcano, Chile, as a result of the 2008-2009 eruption. Photo by C. Bonadonna (21 January 2009)

Figure OS9.12. Ash aggregates deposited on plants in Pumalin Park, Sendero Michimauida, ~10 km from Chaiten volcano, Chile, as a result of the 2008-2009 eruption. Photo by C. Bonadonna (18 January 2009)

Figure OS9.13. Reworking of ash deposited as a result of the 2008-2009 eruption of Chaiten volcano, Chile (~70 km SE of the volcano). Photo by C. Bonadonna (23 January 2009)

Figure OS9.14. Ash deposited on ground as a result of the 2008-2009 eruption of Chaiten volcano, Chile (~70 km SE of the volcano). Photo by C. Bonadonna (23 January 2009)

Figure OS9.15. Effects on Chaiten town of the lahars generated in May 2008 from reworking of tephra deposits. Photo by C. Bonadonna (20 January 2009)

References

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