



## Pubblicazioni 2013

1455. Acocella, V., **Neri M.** and Norini G. (2013). An overview of experimental models to understand a complex volcanic instability: Application to Mount Etna, Italy, *Journal of Volcanology and Geothermal Research*, **251**, 98–111.
1456. **Aloisi, M., Bruno V., Cannavò F.**, Ferranti L., **Mattia M.** and Monaco C. (2013). Are the source models of the M7.1 1908 Messina Straits earthquake reliable? Insights from a novel inversion and a sensitivity analysis of levelling data, *Geophys. J. Int.*, **192**, 3, 1025–1041.
1457. **Alparone, S., Bonaccorso A., Bonforte A.** and **Currenti G.** (2013). Long-term stress-strain analysis of volcano flank instability: The eastern sector of Etna from 1980 to 2012, *Journal of geophysical research - solid earth*, **251**, 16–26
1458. **Alparone, S., Cocina O., Gambino S., Mostaccio A., Spampinato S., Tuvè T.** and **Ursino A.** (2013). Seismological features of the Pernicana–Provenzana Fault System (Mt. Etna, Italy) and implications for the dynamics of northeastern flank of the volcano, *Journal of volcanology and geothermal research*, **118**, 1–11.
1459. **Alparone, S., D'Amico S., Gambino, S.** and **Maiolino V.** (2013). Buried active faults in the Zafferana Etnea territory (south-eastern flank of Mt. Etna): geometry and kinematics by earthquake relocation and focal mechanisms, *Annals of Geophysics*, **56**, 19.
1460. **Andronico, D., Lo Castro M.D., Sciotto M.** and **Spina L.** (2013). The 2010 ash emissions at the summit craters of Mt Etna: Relationship with seismo-acoustic signals, *J. Geophys. Res. Solid Earth*, **118**, 51–70.
1461. **Andronico, D.,** Taddeucci J., **Cristaldi A.,** Miraglia M., Scarlato P.G., and Gaeta M. (2013). The 15 March 2007 paroxysm of Stromboli: video-image analysis, and textural and compositional features of the erupted deposit. *Bull. Volcanol.*, **75**, 733.
1462. **Angelica, C., Bonforte A.,** Distefano G., Serpelloni E. and Gresta S. (2013). Seismic potential in the Italian Peninsula from integration and comparison of seismic and geodetic strain rates, *Tectonophysics*, **608**, 996–1006.
1463. **Aranzulla, M., Cannavò F., Scollo S., Puglisi G.** and Immè G. (2013). Volcanic ash detection by GPS signal, *GPS Solutions*, **17**, 485–497.
1464. **Azzaro, R., Bonforte A., Branca S.** and **Guglielmino F.** (2013). Geometry and kinematics of the fault systems controlling the unstable flank of Etna volcano (Sicily), *Journal of volcanology and geothermal research*, **251**, 5–15.
1465. **Azzaro, R., D'Amico S.,** Rotondi R., **Tuvè T.** and Zonno G., (2013). Forecasting seismic scenarios on Etna volcano (Italy) through probabilistic intensity attenuation models: A Bayesian approach, *Journal of volcanology and geothermal research*, **251**, 149–157.
1466. **Azzaro, R., D'Amico S.,** Peruzza L. and **Tuvè T.** (2013). Probabilistic seismic hazard at Mt. Etna (Italy): The contribution of local fault activity in mid-term assessment, *Journal of volcanology and geothermal research*, **251**, 158–169.

1467. Azzopardi, F., Raymond E., **Prestifilippo M.**, **Scollo S.**, and **Coltelli M.** (2013). The effect of Etna volcanic ash clouds on the Maltese Islands, *Journal of Volcanology and Geothermal Research*, **260**, 13-26.
1468. Barreca, G., **Bonforte A.** and **Neri M.** (2013). A pilot GIS database of active faults of Mt. Etna (Sicily): A tool for integrated hazard evaluation, *Journal of Volcanology and Geothermal Research*, **251**, 170–186.
1469. Bartolini, S., **Cappello A.**, Martì J. And **Del Negro C.** (2013). QVAST: a new Quantum GIS plugin for estimating volcanic susceptibility, *Nat. Hazards Earth Syst. Sci.*, **13**, 3031–3042.
1470. Becerril, L., **Cappello A.**, Galindo I., **Neri M.** and **Del Negro C.** (2013). Spatial probability distribution of future volcanic eruptions at El Hierro Island (Canary Islands, Spain), *Journal of Volcanology and Geothermal Research*, **257**, 21–30.
1471. Bignami, C., Ruch J., Chini M., **Neri M.**, Buongiorno M. F., Sri H., Dewi Sri S. and Surono S. (2013). Pyroclastic density current volume estimation after the 2010 Merapi volcano eruption using X-band SAR, *Journal of Volcanology and Geothermal Research*, **261**, 236–243.
1472. **Bilotta, G.**, Sanchez, R. and **Ganci, G.** (2013) Optimizing Satellite Monitoring of Volcanic Areas Through GPUs and Multi-Core CPUs Image Processing: An OpenCL Case Study, *IEEE journal of selected topics in applied Earth observations and remote sensing*, **6**, 2445–2452.
1473. **Bonaccorso, A.** and **Calvari S.** (2013). Major effusive eruptions and recent lava fountains: Balance between expected and erupted magma volumes at Etna volcano, *Geophysical Research Letters*, **40**, 6069–6073.
1474. **Bonaccorso, A.**, **Calvari S.**, **Currenti G.**, **Del Negro C.**, **Ganci G.**, Linde A., et al, (2013). From source to surface: dynamics of Etna's lava fountains investigated by continuous strain, magnetic, ground and satellite thermal data, *Bulletin of volcanology*, **75**, 690–702.
1475. **Bonaccorso, A.**, **Currenti G.** and **Del Negro C.** (2013). Interaction of volcano-tectonic fault with magma storage, intrusion and flank instability: a thirty years study at Mt. Etna volcano, *Journal of volcanology and geothermal research*, **251**, 127–136.
1476. **Bonaccorso, A.**, **Currenti G.**, Linde A. and Sacks S. (2013). New data from borehole strainmeters to infer lava fountain sources (Etna 2011-2012), *Geophysical Research Letters*, **40**, 3579–3584.
1477. Bonadonna, C., Cioni R., Pistolesi M., Connor C., **Scollo S.**, Pioli L. and Rosi M. (2013), Determination of the largest clast sizes of tephra deposits for the characterization of explosive eruptions: a study of the IAVCEI Commission on Tephra Hazard Modelling, *Bulletin of Volcanology*, **75**, 680.
1478. **Bonforte, A.**, Carnazzo A., **Gambino S.**, **Guglielmino F.**, Obrizzo F. and **Puglisi G.** (2013). A multidisciplinary study of an active fault crossing urban areas: The Trecastagni Fault at Mt. Etna (Italy), *Journal of volcanology and geothermal research*, **251**, 41– 49.
1479. **Bonforte, A.**, Federico C., **Giammanco S.**, **Guglielmino F.**, Liuzzo M. and **Neri M.** (2013). Soil gases and SAR measurements reveal hidden faults on the sliding flank of Mt. Etna (Italy), *Journal of Volcanology and Geothermal Research*, **251**, 27–40.
1480. **Bonforte, A.**, **Guglielmino F.** and **Puglisi G.** (2013). Interaction between magma intrusion and flank dynamics at Mt. Etna in 2008, imaged by integrated dense GPS and DInSAR data, *Geochemistry, Geophysics, Geosystems*, **14**, 2818–2835.
1481. **Branca, S.** and Ferrara V. (2013). The morphostructural setting of Mount Etna sedimentary basement (Italy): Implications for the geometry and volume of the volcano and its flank instability, *Tectonophysics*, **586**, 46–64.
1482. **Branca, S.**, **De Beni E.** and **Proietti C.** (2013). The large and destructive 1669 AD Etna eruption: reconstruction of the lava flow field evolution and effusion rate trend, *Bull Volcanol* , **75**, 694.

1483. **Cannata, A., Alparone S. and Ursino A.** (2013). Repeating volcano-tectonic earthquakes at Mt. Etna volcano (Sicily, Italy) during 1999–2009, *Gondwana research*, **24**, 1223–1236.
1484. **Cannata, A., Di Grazia G., Aliotta M., Cassisi C., Montalto P. and Patanè D.** (2013). Monitoring Seismo-volcanic and Infrasonic Signals at Volcanoes: Mt. Etna Case Study, *Pure Appl. Geophys.*, **11**, 170.
1485. **Cannata, A., Montalto P. and Patanè D.** (2013). Joint analysis of infrasound and seismic signals by cross wavelet transform: detection of Mt. Etna explosive activity, *Nat. Hazards Earth Syst. Sci.*, **13**, 1669–1677.
1486. **Cappello, A., Bilotta G., Neri M. and Del Negro C.** (2013). Probabilistic modeling of future volcanic eruptions at Mount Etna, *Journal of geophysical research - solid earth*, **118**, 1925–1935.
1487. **Carbone, D., Gilbert D., Marteau J., Diament M., Zuccarello L. and Galichet E.** (2013). An experiment of muon radiography at Mt Etna (Italy), *Geophysical Journal International*, **1/196**, 1–11.
1488. **Carbone, D., Poland M. P., Patrick M. R. and Orr T. R.** (2013). Continuous gravity measurements reveal low-density lava lake at Kilauea Volcano, Hawaii, *Earth and planetary science letters*, **376**, 178–185.
1489. Carmelo, A., **Bonforte A.**, Distefano G., Serpelloni E. and **Gresta, S.** (2013). Seismic potential in the Italian Peninsula from integration and comparison of seismic and geodetic strain rates, *Tectonophysics*, **608**, 996–1006.
1490. **Cassisi, C., Aliotta M., Cannata A., Montalto P., Patanè D., Pulvirenti A. and Spampinato L.** (2013). Motif Discovery on Seismic Amplitude Time Series: The Case Study of Mt Etna 2011 Eruptive Activity, *Pure and Appl. Geophysics*, **170**, 529–545.
1491. Catalano, S., **Bonforte A., Guglielmino F., Romagnoli G., Tarsia C. and Tortorici G.** (2013). The influence of erosional processes on the visibility of Permanent Scatterers Features from SAR remote sensing on Mount Etna (E Sicily), *Geomorphology*, **198**, 128–137.
1492. Cioni, R., D’Orlando C., Bertagnini A. and **Andronico D.** (2013). The 2nd to 4th century explosive activity of Vesuvius: new data on the timing of the upward migration of the post-A.D. 79 magma chamber. *Ann. Geoph.*, **56**, 4.
1493. **Corsaro, R. A., Di Renzo V., Distefano S., Miraglia L. and Civetta L.** (2013). Relationship between petrologic processes in the plumbing system of Mt. Etna and the dynamics of the eastern flank from 1995 to 2005, *Journal of Volcanology and Geothermal Research*, **251**, 1–4.
1494. **D’Agostino, M., Di Grazia G., Ferrari F., Langer H., Messina A., Reitano D. and Spampinato S.** (2013). Volcano monitoring and early warning on Mt Etna based on volcanic tremor – Methods and technical aspects, *NOVA Science Publishers, Inc.*, Chapter 4, 53-91.
1495. D’Alessandro, A., **Scarfi L., Scaltrito A., Di Prima S. and Rapisarda, S.** (2013). Planning the improvement of a seismic network for monitoring active volcanic areas: the experience on Mt. Etna, *Advances in Geosciences (ADGEO)*, **36**, 39–47.
1496. De Guidi, G., **Lanzafame G., Palano M., Puglisi G., Scaltrito A. and Scarfi, L.** (2013). Multidisciplinary study of the Tindari Fault (Sicily, Italy) separating ongoing contractional and extensional compartments along the active Africa–Eurasia convergent boundary, *Tectonophysics*, **588**, 1–17.
1497. **Del Negro, C., Cappello A., Neri M., Bilotta G., Herault A. and Ganci G.** (2013). Lava flow hazards at Mount Etna: constraints imposed by eruptive history and numerical simulations, *Scientific Reports*, **3**, 3493, 1-8.
1498. **Del Negro, C., Currenti G., Solaro G., Greco F., Pepe A., Napoli R., Pepe S., Casu F. and Sansosti E.** (2013). Capturing the fingerprint of Etna volcano activity in gravity and satellite radar data, *Scientific reports*, **3** : 3089 | DOI: 10.1038/srep03089, Nature Publishing Group.

1499. Di Salvo, R., **Montalto P.**, Nunnari G., **Neri M.** and **Puglisi, G.** (2013). Multivariate time series clustering on geophysical data recorded at Mt. Etna from 1996 to 2003, *Journal of Volcanology and Geothermal Research*, **251**, 65–74.
1500. **Falsaperla, S.**, **Barberi G.** and **Cocina O.** (2013). The failed eruption of Mt. Etna in December 2005: evidence from volcanic tremor analyses, *Geochemistry, Geophysics, Geosystems*, **12/14**, 1–17.
1501. **Ganci, G.**, James M.R., **Calvari S.** and **Del Negro C.** (2013). Separating the thermal fingerprints of lava flows and simultaneous lava fountaining using ground-based thermal camera and SEVIRI measurements, *Geophysical Research Letters*, **40**, 1–6.
1502. **Giammanco, S.**, **Neri M.**, **Salerno G.**, **Caltabiano T.**, Burton M.R. and **Longo V.** (2013). Evidence for a recent change in the shallow plumbing system of Mt. Etna (Italy): Gas geochemistry and structural data during 2001–2005, *Journal of Volcanology and Geothermal Research*, **251**, 90–97.
1503. **Guglielmino, F.**, Anzidei M., Briole P., Elias P. and **Puglisi G.** (2013). 3D displacement maps of the 2009 L'Aquila earthquake (Italy) by applying the SISTEM method to GPS and DInSAR data, *Terra Nova*, **25**, 79–85.
1504. Gurioli, L., Harris A.J.L., Colò L., Bernard J., Favalli M., Ripepe M., and **Andronico D.** (2013). Classification, landing distribution, and associated flight parameters for a bomb field emplaced during a single major explosion at Stromboli, Italy. *Geology*, **41**, 5, 559-562.
1505. **Larocca, G.**, **Contrafatto D.**, **D'Agostino M.** and **Spampinato S.** (2013). Checkstation: software per il controllo dello stato di funzionamento della rete sismica permanente, *Rapporti Tecnici INGV*, **250**.
1506. **La Spina, A.**, Burton M. R., Harig R., **Mure F.**, Rausch P., Jordan M., et al, (2013). New insights into volcanic processes at Stromboli from Cerberus, a remote-controlled open-path FTIR scanner system, *Journal of volcanology and geothermal research*, **249**, 66–76.
1507. Lautze, N.C., Taddeucci J., **Andronico D.**, Houghton B., Niemeijer A., Scarlato P.G. (2013). Insights into explosion dynamics and the production of ash at Stromboli from samples collected in real-time, October 2009. *Geol. Soc. Am. Special papers*, **498**, 125-139.
1508. **Miraglia, L.** (2013). Determinazione degli elementi maggiori in rocce silicatiche mediante fluorescenza ai raggi-X su dischi fusi (perle), *Rapporti Tecnici INGV*, **261**
1509. **Montalto, P.**, **Aliotta M.**, **Cassisi C.** and **Cannata A.** (2013). SeismicOffice, una suite software per l'analisi e la gestione dei dati sismici, *Rapporti Tecnici INGV*, **248**.
1510. Murè, F., Larocca G., Spampinato L., Caltabiano T., Salerno G. G., Montalto P. and Scuderi L. (2013). Installazione di un radiometro nell'area sommitale del vulcano Etna, *Rapporti Tecnici INGV*, **259**.
1511. **Neri, M.**, Le Cozannet G., Thierry P., Bignami C. and Ruch J. (2013). A method for multi-hazard mapping in poorly known volcanic areas: an example from Kanlaon (Philippines), *Nat. Hazards Earth Syst. Sci*, **13**, 1929–1943.
1512. Nicoletti, A., Bruno E., Nania M., Cicero E., Messina S., Chisari C., Torrisi J., Maimone D., Marziolo R., Lo Fermo S., Patti F., **Giammanco S.** and Zappia M. (2013), Multiple Sclerosis in the Mount Etna Region: Possible Role of Volcanogenic Trace Elements, *PLoS one*, **12/8**, 1–6.
1513. Olgun, N., Duggen S., **Andronico D.**, Kutterolf S., Croot P. L., **Giammanco S.**, Censi P. and Randazzo L. (2013). Possible impacts of volcanic ash emissions of Mount Etna on the primary productivity in the oligotrophic Mediterranean Sea: Results from nutrient-release experiments in seawater, *Marine chemistry*, **152**, 32–42.
1514. **Palano, M.**, González P. J. and Fernández J. (2013). Strain and stress fields along the Gibraltar Orogenic Arc: constraints on active geodynamics, *Gondwana research*, **23**, 1071–1088.

1515. **Palano, M.**, Imprescia P. and Gresta S. (2013). Current stress and strain-rate fields across the Dead Sea Fault System: Constraints from seismological data and GPS observations, *Earth and planetary science letters*, **369–370**, 305–316.
1516. Paonita, A., Federico C., **Bonfanti P.**, Capasso G., Inguaggiato S., Italiano F., Madonia P., Pecoraino G. and Sortino F. (2013). The episodic and abrupt geochemical changes at La Fossa fumaroles (Vulcano Island, Italy) and related constraints on the dynamics, structure, and compositions of the magmatic system, *Geochimica et Cosmochimica Acta*, **120**, 158–178.
1517. **Patanè, D.**, Aiuppa A., **Aloisi M.**, **Behncke B.**, **Cannata A.**, **Coltelli M.**, et al. (2013). Insights into magma and fluid transfer at Mount Etna by a multiparametric approach: A model of the events leading to the 2011 eruptive cycle, *Journal of geophysical research - solid earth*, **118**, 3519–3539.
1518. Pesci, A., Teza G., Casula G., Fabris M. and **Bonforte A.** (2013). Remote Sensing and Geodetic Measurements for Volcanic Slope Monitoring: Surface Variations Measured at Northern Flank of La Fossa Cone (Vulcano Island, Italy), *Remote Sens.*, **5**, 2238–2256.
1519. Rivalta, E., Pascal, K., Phillips, G. and **Bonaccorso, A.** (2013). Explosive expansion of a slowly-decompressed magma analog: evidence of delayed bubble nucleation, *Geochemistry, Geophysics, Geosystems*, **14**, 3067–3084.
1520. Rizzo, A. L., Caracausi A., Liotta M., Paonita A., Barnes J. D., **Corsaro R. A.** and Martelli M. (2013). Chlorine isotope composition of volcanic gases and rocks at Mount Etna (Italy) and inferences on the local mantle source, *Earth and Planetary Science Letters*, **371–372**, 134–142.
1521. Ruch, J., Pepe S., Casu F., Solaro G., Pepe A., Acocella V., **Neri M.** and Sansosti E. (2013). Seismo-tectonic behavior of the Pernicana Fault System (Mt Etna): A gauge for volcano flank instability?, *Journal of geophysical research - solid earth*, **118**, 4398–440.
1522. **Scarfi, L.**, **Messina A.** and **Cassisi C.** (2013). Sicily and Southern Calabria focal mechanism database: a valuable tool for local and regional stress field determination, *Annals of Geophysics*, **56**, 1–16.
1523. **Sciotto, M.**, **Cannata A.**, Gresta S., **Privitera E.** and **Spina L.** (2013). Seismic and Infrasound Signals at Mt. Etna: Modelling the North-East Crater Conduit and its Relation with the 2008-2009 Eruption Feeding System, *Journal of Volcanology and Geothermal Research*, **254**, 53–68.
1524. **Scollo, S.**, **Coltelli M.**, Bonadonna C. and Del Carlo P. (2013), Tephra hazard assessment at Mt. Etna (Italy), *Nat. Hazards Earth Syst. Sci.*, **13**, 3221-3233.
1525. **Scollo, S.**, Baratta G. A., Palumbo M. E., Corradini S., Leto G. and Strazzulla G. (2013), Linking the IR transmittance to size and type of volcanic ash particles, *Journal of Geophysical Research-Atmospheres*, **118**, 12,207–12,215.
1526. **Sicali, A.** and **Bonaccorso A.** (2013). Gestione dei dilatometri installati in pozzi profondi all'Etna, *Rapporti Tecnici INGV*, **258**.
1527. **Spampinato, L.**, **Ganci G.**, Hernández P. A., Calvo D., Tedesco D., Pérez N. M., **Calvari S.**, **Del Negro C.**, and Yalire M. M. (2013). Thermal insights into the dynamics of Nyiragongo lava lake from ground and satellite measurements, *Journal of geophysical research – solid earth*, **118**, 1–14.
1528. Taddeucci, J., Palladino D.M., Sottili G., Bernini D., **Andronico D.** and **Cristaldi A.** (2013). Linked frequency and intensity of persistent volcanic activity at Stromboli (Italy). *Geophys. Res. Lett.*, **40**, 1–5.
1529. Tamburello, G., Aiuppa A., McGonigle A. J. S., Allard P., **Cannata A.**, Giudice G., Kantzas E. P. and Pering T. D. (2013). Periodic volcanic degassing behavior: The Mount Etna example, *Geophysical Research Letters*, **40**, 1–5.
1530. **Zuccarello, L.**, Burton M. R., Saccorotti G., Bean C. J. and Patanè D. (2013). The coupling between very long period seismic events, volcanic tremor, and degassing rates at Mount Etna volcano, *Journal of geophysical research - solid earth*, **118**, 1–12

## **Database**

Del Negro, C.; Cappello, A.; Neri, M.; Bilotta, G.; Hérault, A.; Ganci, G.; "Field data, numerical simulations and probability analyses to assess lava flow hazards at Mount Etna", doi:10.1594/PANGAEA.825014, 2013, PANGAEA® (Data Publisher for Earth & Environmental Science).

Del Negro, C.; Cappello, A.; Neri, M.; Bilotta, G.; Hérault, A.; Ganci, G.; "Etna flank lava flows between 1610 and 2008", doi:10.1594/PANGAEA.825012, 2013, PANGAEA® (Data Publisher for Earth & Environmental Science).

Del Negro, C.; Cappello, A.; Neri, M.; Bilotta, G.; Hérault, A.; Ganci, G.; "Etna summit lava flows between 1955 and 2012", doi:10.1594/PANGAEA.825013, 2013, PANGAEA® (Data Publisher for Earth & Environmental Science).