



Pubblicazioni 2012

1399. **Alparone, S., Barberi G., Cocina O., Giampiccolo E., Musumeci C., Patanè D.** (2012). Intrusive mechanism of the 2008–2009 Mt. Etna eruption: Constraints by tomographic images and stress tensor analysis, *Journal of volcanology and geothermal research*, **229–230**, 50–63, doi:10.1016/j.jvolgeores.2012.04.001.
1400. **Azzaro, R., Branca S.,** Gwinner K., Coltelli M. (2012). The volcano-tectonic map of Etna volcano, 1:100.000 scale: an integrated approach based on a morphotectonic analysis from high-resolution DEM constrained by geologic, active faulting and seismotectonic data, *Ital.J.Geosci. (Boll.Soc.Geol.It.)*, **131**, 1, 153-170, 13 figs., 1 tab., 1 extra pl., doi:10.3301/IJG.2011.29.
1401. **Azzaro, R., D'Amico S.,** Peruzza L., Tuvè T. (2012). Earthquakes and faults at Mt. Etna (Southern Italy): problems and perspectives for a time-dependent probabilistic seismic hazard assessment in a volcanic region, *Boll. Geof. Teor. Appl.*, **52**, DOI 10.4430/bgta0038.
1402. **Bilotta, G., Cappello A., Herault A.,** Vicari A., Russo G., **Del Negro C.** (2012). Sensitivity analysis of the MAGFLOW Cellular Automaton model, *Environmental Modelling & Software*, **35**, 122-131, doi:10.1016/j.envsoft.2012.02.015
1403. **Bonaccorso, A., Cannata A., Corsaro R. A., Di Grazia G., Gambino S., Greco F., Miraglia L., Pistorio A.** (2012). Reply to comment by D. Carbone and D. Patanè on “Multi-disciplinary investigation on a lava fountain preceding a flank eruption: the 10 May 2008 Etna case”, *Geochemistry Geophysics Geosystems*, 13, 11, doi: 10.1029/2012GC004239.
1404. **Bonaccorso, A., Calvari S.,** Linde A., Sacks S., Boschi E. (2012). Dynamics of the shallow plumbing system investigated from borehole strainmeters and cameras during the 15 March 2007 Vulcanian paroxysm at Stromboli volcano, *Earth and planetary science letters*, **357–358**, 249-256.
1405. **Bonforte, A.,** Catalano S., Maniscalco R., Romagnoli G., Sturiale G., Tortorici G. (2012). Active deformation along the northern margin of the Hyblean Plateau (SE Sicily) from GPS and geological data, *Rend. Online Soc. Geol. It.*, **21**, 317-319, 3 figs.
1406. **Brancato, A., Gresta S., Sandri L., Selva J., Marzocchi W., Alparone S., Andronico D., Bonforte A., Caltabiano T., Cocina O., Corsaro R. A., Cristofolini R., Di Grazia A., Distefano G., Ferlito C., Gambino S., Giammanco S., Greco F., Napoli R., Tusa G., Viccaro M.** (2012). Quantifying probabilities of eruption at a well-monitored active volcano: an application to Mt. Etna (Sicily, Italy), *Bollettino di Geofisica Teorica ed Applicata*, **53**, 1, 55-74, doi: 10.4430/bgta0040
1407. **Bruno, V., Mattia M., Aloisi M., Palano M., Cannavò F.,** Holt W. E. (2012). Ground deformations and volcanic processes as imaged by CGPS data at Mt. Etna (Italy) between 2003 and 2008, *Journal of Geophysical Research*, **117**, B07208, doi:10.1029/2011JB009114.
1408. **Calvari, S., Buttner R., Cristaldi A., Dellino P., Giudicepietro F., Orazi M., Peluso R., Spampinato L., Zimanowski B., Boschi E.** (2012). The 7 September 2008 Vulcanian explosion at Stromboli volcano: Multiparametric characterization of the event and quantification of the ejecta, *Journal of Geophysical Research*, **117**, B05201, doi:10.1029/2011JB009048.
1409. **Cannata, A.** (2012). Crustal changes at Mt. Etna volcano accompanying the 2002–2003 eruption as inferred from a repeating earthquake analysis, *Geophysical Research Letters*, **39**, L18311, doi: 10.1029/2012GL053185.

1410. **Cannata, A.**, Diliberto I. S., **Alparone S.**, **Gambino S.**, Gresta S., **Liotta M.**, Madonia P., Milluzzo V., **Aliotta M.**, **Montalto P.** (2012). Multiparametric Approach in Investigating Volcano-Hydrothermal Systems: the Case Study of Vulcano (Aeolian Islands, Italy), *Pure Appl. Geophys*, **169**, 167–182, doi: 10.1007/s00024-011-0297-z.
1411. **Cannavò, F.** (2012). Sensitivity analysis for volcanic source modeling quality assessment and model selection, *Computers & geosciences*, **44**, 52-59, doi:10.1016/j.cageo.2012.03.008.
1412. **Cappello, A.**, **Neri M.**, Acocella V., Gallo G., Vicari A., **Del Negro C.** (2012). Spatial vent opening probability map of Etna volcano (Sicily, Italy), *Bull Volcanol*, **74**, doi: 10.1007/s00445-012-0647-4.
1413. **Carbone, D.**, **Zuccarello L.**, **Montalto P.**, Rymer H. (2012). New geophysical insight into the dynamics of Stromboli volcano (Italy), *Gondwana research*, **22**, doi:10.1016/j.gr.2011.09.007.
1414. **Carbone, D.**, Poland M. (2012). Gravity fluctuations induced by magma convection at Kilauea, Hawai'i, *Geology*, **40**, 9, 803–806, doi:10.1130/G33060.1.
1415. **Carbone, D.** and **Patanè D.** (2012). Comment on "Multidisciplinary investigation on a lava fountain preceding a flank eruption: The 10 May 2008 Etna case" by A. Bonaccorso et al., *Geochemistry Geophysics Geosystem*, **13**, 11, doi: 10.1029/2012GC004074.
1416. Cassisi, C., **Montalto P.**, **Aliotta M.**, **Cannata A.**, Pulvirenti A. (2012). Editors: Karahoca, A.; Bahcesehir University, Engineering Faculty Title: Similarity Measures and Dimensionality Reduction Techniques for Time Series Data Mining *Book chapters*, ISBN: 978-953-51-0748-4
1417. **Coltelli, M.**, Marsella M., **Proietti C.**, Scifoni S. (2012). The case of the 1981 eruption of Mount Etna: An example of very fast moving lava flows, *Geochemistry Geophysics Geosystems*, **13**, 1, doi: 10.1029/2011GC003876
1418. **Currenti, G.** Solaro G., **Napoli R.**, Pepe A., **Bonaccorso A.**, **Del Negro C.**, Sansosti E. (2012). Modeling of ALOS and COSMO-SkyMed satellite data at Mt Etna: implications on relation between seismic activation of the Pernicana fault system and volcanic unrest, *Remote sensing of environment*, **125**, 64-72 doi:10.1016/j.rse.2012.07.008.
1419. **D'Agostino, M.**, **Di Grazia G.**, **Ferrari F.**, **Langer H.**, **Messina A.**, **Reitano D.**, **Spampinato S.** (2012). Editors: Zobin, V., Title: Volcano monitoring and early warning on Mt Etna based on volcanic tremor – Methods and technical aspects, *Book chapters*
1420. de Angelis, M., **Greco F.**, Pistorio A., Poli N., Prevedelli M., Saccorotti G., Sorrentino F., Tino G. M. (2012). Absolute gravity acceleration measurement in atomic sensor laboratories, *Eur. Phys. J. Plus*, **127**, 27, doi: 10.1140/epjp/i2012-12027-9.
1421. Del Carlo, P., **Branca S.**, **De Beni E.**, **Lo Castro M. D.**, Wijbrans, J. R. (2012). The Mt. Moio eruption (Etna): Stratigraphy, petrochemistry and $^{40}\text{Ar}/^{39}\text{Ar}$ age determination with inferences on the relationship between structural setting and magma intrusion, *Journal of volcanology and geothermal research*, **241–242**, 49–60 doi:10.1016/j.jvolgeores.2012.05.021.
1422. **Gambino, S.**, Milluzzo V., **Scaltrito A.**, **Scarfi, L.** (2012). Relocation and focal mechanisms of earthquakes in the south-central sector of the Aeolian Archipelago: New structural and volcanological insights, *Tectonophysics*, 524-525, 108-115, doi:10.1016/j.tecto.2011.12.024.
1423. **Ganci, G.**, **Vicari A.**, **Cappello A.**, **Del Negro C.** (2012). An emergent strategy for volcano hazard assessment: From thermal satellite monitoring to lava flow modeling, *Remote Sensing of Environment*, **119**, 197-207, doi:10.1016/j.rse.2011.12.021.
1424. **Ganci, G.**, **Harris A. J. L.**, **Del Negro C.**, Guehenneux Y., Cappello A., Labazuy P., **Calvari S.**, Gouhier M. (2012). A year of lava fountaining at Etna: Volumes from SEVIRI, *Geophysical Research Letters*, **39**, L06305, doi:10.1029/2012GL051026.
1425. **Giammanco, S.**, **Bonfanti P.**, Carapezza M. L., Pagliuca N., Quattrocchi F., Ricci T., Sciarra A., **Spampinato L.** (2012). Preliminary investigation on soil CO₂ and soil CH₄ effluxes from a geothermal area near Palagonia (Sicily, Italy), *Rendiconti online della società geologica Italiana*, 21.

1426. González, P. J., Tiampo K. F., **Palano M., Cannavò F.**, Fernández J. (2012). The 2011 Lorca earthquake slip distribution controlled by groundwater crustal unloading, *Nature Geoscience*, **5**,11,
1427. González, P. J., Tiampo K. F., **Palano M., Cannavò F.**, Fernández J. (2012). Determinación geodésica del deslizamiento de falla para el terremoto de Lorca del 11 de Mayo de 2011 usando interferometría radar y GPS, *Fisica de la Tierra*, **24**
1428. Gouhier, M., **Harris A. J. L., Calvari S.**, Labazuy P., Guéhenneux Y., Donnadiou F., Valade S. (2012). Lava discharge during Etna's January 2011 fire fountain tracked using MSG-SEVIRI, *Bull Volcanol*, **74**, 787–793, doi: 10.1007/s00445-011-0572-y.
1429. Gouhier M., Harris A.J.L., **Calvari S.**, Labazuy P., Guéhenneux Y., Donnadiou F., and Valade S. (2012) – Erratum to: Lava discharge during Etna's January 2011 fire fountain tracked using MSG-SEVIRI. *Bulletin of Volcanology*, **74**, 1261, doi: 10.1007/s00445-012-0614-0.
1430. **Greco, F., Currenti G.**, D'Agostino G., Germak A., **Napoli R.**, Pistorio A., **Del Negro C.** (2012). Combining relative and absolute gravity measurements to enhance volcano monitoring, *Bull. Volcanol.*, **74**, 1745–1756' doi: 10.1007/s00445-012-0630-0.
1431. Hajian, A., Zomorrodian H., Styles P., **Greco F.**, Lucas C. (2012). Depth estimation of cavities from microgravity data using a new approach: the local linear model tree (LOLIMOT), *Near Surface Geophysics*, **10**, 3, doi: 10.3997/1873-0604.2011039.
1432. Harris, A. J. L., Steffke A., **Calvari S., Spampinato L.** (2012). Correction to “Thirty years of satellite-derived lava discharge rates at Etna: Implications for steady volumetric output”, *Journal of geophysical research*, **117**, B08207, doi:10.1029/2012JB009431.
1433. Harris, A., **Alparone S., Bonforte A.**, Jonathan D., **Gambino S., Lodato L., Spampinato L.** (2012). Vent temperature trends at the Vulcano Fossa fumarole field: 5 the role of permeability, *Bull Volcanol* , **74**, 1293–1311, doi: 10.1007/s00445-012-0593-1.
1434. Jiang, Z. Palinkas V., Arias F. E., Liard J., Merlet S., Wilmes H., Vitushkin L., Robertsson L., Tisserand L., Pereira Dos Santos F., Bodart Q., Falk R., Baumann H., Mizushima S., Makinen J., Bilker-Koivula M., Lee C., Choi I. M., Karaboce B., Ji W., Wu Q., Ruess D., Ullrich C., Kostelecky J., Schmerge D., Eckl M., Timmen L., Le Moigne N., Bayer R., Olszak T., Agren J., **Del Negro C., Greco F.**, Diament M., Deroussi S., Bonvalot S., Krynski J., Sekowski M., Hu H., Wang L. J., Svitlov S., Germak A., Francis O., Becker M., Inglis D., Robinson I. (2012). The 8th International Comparison of Absolute Gravimeters 2009: the first Key Comparison (CCM.G-K1) in the field of absolute gravimetry, *Metrologia* **49**, 666–684, doi:10.1088/0026-1394/49/6/666
1435. Lautze, N. C., Taddeucci J., **Andronico D., Cannata C.**, Tornetta L., Scarlato P., Houghton B., **Lo Castro M. D.** (2012). SEM-based methods for the analysis of basaltic ash from weak explosive activity at Etna in 2006 and the 2007 eruptive crisis at Stromboli, *Physics and Chemistry of the Earth, Parts A/B/C*, 45-46, 113-127, doi: 10.1016/j.pce.2011.02.001.
1436. **Mangiagli, S., D'Agostino M., Reitano D., Torrisi O.** (2012). Progettazione dell'infrastruttura per la gestione e l'hosting del portale web dell'Osservatorio Etneo dell'Istituto Nazionale di Geofisica e Vulcanologia, *Rapporti Tecnici INGV*, **243**
1437. Marsella M., Baldi P., **Coltelli M.**, Fabris M. (2012). The morphological evolution of the Sciara del Fuoco since 1868: reconstructing the effusive activity at Stromboli volcano, *Bull Volcanol*, **74**, 1, doi: 10.1007/s00445-011-0516-6.
1438. **Mattia, M., Pellegrino D., Pulvirenti M., Rossi M.** (2012). Applicazioni di sistemi di comunicazione wireless a 5 GHz per il monitoraggio multiparametrico dell'Etna, *Rapporti Tecnici*, **207**.
1439. **Mattia, M., Bruno V., Cannavò, F., Palano M.** (2012). Evidences of a contractional pattern along the northern rim of the Hyblean Plateau (Sicily, Italy) from GPS data, *Geologica Acta*, **10**, 12, 1-8, doi: 10.1344/105.000001705
1440. **Montalto, P., Aliotta M., Cannata A.**, Cassisi C. (2012). Segmentazione delle serie temporali nell'analisi dei dati: un esempio di applicazione a dati sismo-vulcanici, *Rapporti tecnici*, **224**, ISSN 2039-7941.

1441. **Palano, M.**, Guarrera E., **Mattia M.** (2012). GPS ground deformation patterns at Mount St. Helens (Washington, USA) from 2004 to 2010, *Terra Nova*, **24**, 2, 148–155, doi:10.1111/j.1365-3121.2011.01049.x.
1442. **Palano, M.**, Ferranti L., Carmelo M., **Mattia M.**, **Aloisi M.**, **Bruno V.**, **Cannavò F.** (2012). GPS velocity and strain fields in Sicily and southern Calabria, Italy: updated geodetic constraints on tectonic block interaction in the central Mediterranean, *Journal of Geophysical Research*, **117**, B07401, doi:10.1029/2012JB009254, 2012.
1443. Pisani, G., Boselli A., **Coltelli M.**, Leto G., Pica G., **Scollo S.**, Spinelli N., Wang X. (2012). Lidar depolarization measurement of fresh volcanic ash from Mt. Etna, Italy, *Atmospheric Environment*, **62**, 34-40, doi: 10.1016/j.atmosenv.2012.08.015
1444. **Privitera, E.**, Bonanno A., Gresta S., Nunnari G., **Puglisi G.** (2012). Triggering mechanisms of static stress on Mount Etna volcano. An application of the boundary element method, *Journal of volcanology and geothermal research*, 245–246, 149–158, doi: 10.1016/j.jvolgeores.2012.08.012.
1445. Ruch, J., Pepe S., Casu F., Acocella V., **Neri M.**, Solaro G., Sansosti E. (2012). How do volcanic rift zones relate to flank instability? Evidence from collapsing rifts at Etna, *Geophysical Research Letters*, **39**, 10.1029/2012GL053683.
1446. **Scarfi, L.**, Raffaele R. Badi G., Ibanez J. M., Imposa S., Araujo M., Sabbione N. (2012). Seismotectonic features from accurate hypocentre locations in southern central Andes (western Argentina), *Tectonophysics*, 518-521, doi:10.1016/j.tecto.2011.11.009.
1447. **Scollo S.**, Kahn R. A., Nelson D. L., **Coltelli M.**, Diner D. J., Garay M. J., Realmuto V. J. (2012). MISR observations of Etna volcanic plumes, *Journal of Geophysical Research*, **117**, D06210, doi:10.1029/2011JD016625.
1448. **Scollo, S.**, Boselli A., **Coltelli M.**, Leto G., Pisani G., Spinelli N., Wang X. (2012). Monitoring Etna volcanic plumes using a scanning LiDAR, *Bull Volcanol*, **74**, 10, doi: 10.1007/s00445-012-0669-y.
1449. Siniscalchi, A., Tripaldi S., **Neri M.**, Balasco M., Romano G., Ruch J., Schiavone D. (2012). Flank instability structure of Mt. Etna inferred by a magnetotelluric survey, *Journal of Geophysical Research*, **117**, B03216, doi:10.1029/2011JB008657.
1450. **Spampinato, L.**, Oppenheimer C., **Cannata A.**, **Montalto P.**, **Salerno G. G.**, **Calvari S.** (2012). On the time-scale of thermal cycles associated with open-vent degassing, *Bull. Volcanol.*, **74**, 1281–1292, doi: 10.1007/s00445-012-0592-2
1451. **Spampinato, L.**, **Salerno G.** (2012). Editors: Hwee-San, L.; Universiti Sains Malaysia (USM), Title: Heat and SO2 Emission Rates at Active Volcanoes - The Case Study of Masaya, Nicaragua, *Book chapters*, ISBN: 978-953-51-0263-2.
1452. Tanguy, J.-C., Condomines M., **Branca S.**, La Delfa S., Itelli M. (2012). New archeomagnetic and ²²⁶Ra-²³⁰Th dating of recent lavas for the Geological map of Etna volcano, *Ital. J. Geosci. (Boll. Soc. Geol. It.)*, **131**, 2, 241-257, 8 figs., 4 tabs., doi: 10.3301/IJG.2012.01.
1453. Tanner, L. H., **Calvari S.** (2012). Publisher: New Mexico Museum of Natural History & Science, A Division of the Department of Cultural Affairs, Title: Volcanoes: Windows on the Earth, *Book*, ISBN: 978-0-615-66350-0.
1454. **Tusa, G.**, **Langer H.**, Brancato A., Gresta S. (2012). High-frequency spectral decay in P-wave acceleration spectra and source parameters of microearthquakes in southeastern Sicily, Italy, *Bulletin of the Seismological Society of America*, **102**, 4, doi: 10.1785/0120110206.