List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Radar interferometry techniques for the study of ground subsidence phenomena: a review of practical issues through cases in Spain. Environmental Earth Sciences, 2014, 71, 163-181.	1.3	135
2	The 2011 Lorca earthquake slip distribution controlled by groundwater crustal unloading. Nature Geoscience, 2012, 5, 821-825.	5.4	123
3	4D volcano gravimetry. Geophysics, 2008, 73, WA3-WA18.	1.4	119
4	Spherical and ellipsoidal volcanic sources at Long Valley caldera, California, using a genetic algorithm inversion technique. Journal of Volcanology and Geothermal Research, 2000, 102, 189-206.	0.8	113
5	Shallow structure beneath the Central Volcanic Complex of Tenerife from new gravity data: Implications for its evolution and recent reactivation. Physics of the Earth and Planetary Interiors, 2008, 168, 212-230.	0.7	89
6	Magma storage and migration associated with the 2011–2012 El Hierro eruption: Implications for crustal magmatic systems at oceanic island volcanoes. Journal of Geophysical Research: Solid Earth, 2013, 118, 4361-4377.	1.4	83
7	The Diffuse Plate boundary of Nubia and Iberia in the Western Mediterranean: Crustal deformation evidence for viscous coupling and fragmented lithosphere. Earth and Planetary Science Letters, 2015, 430, 439-447.	1.8	77
8	Mapping Vulnerable Urban Areas Affected by Slow-Moving Landslides Using Sentinel-1 InSAR Data. Remote Sensing, 2017, 9, 876.	1.8	76
9	Twenty-year advanced DInSAR analysis of severe land subsidence: The Alto GuadalentÃn Basin (Spain) case study. Engineering Geology, 2015, 198, 40-52.	2.9	67
10	Gravity changes and deformation due to a magmatic intrusion in a two-layered crustal model. Journal of Geophysical Research, 1994, 99, 2737-2746.	3.3	61
11	Volcano Geodesy: Recent developments and future challenges. Journal of Volcanology and Geothermal Research, 2017, 344, 1-12.	0.8	61
12	Error estimation in multitemporal InSAR deformation time series, with application to Lanzarote, Canary Islands. Journal of Geophysical Research, 2011, 116, .	3.3	56
13	New evidence for the reawakening of Teide volcano. Geophysical Research Letters, 2006, 33, .	1.5	55
14	Shallow flank deformation at Cumbre Vieja volcano (Canary Islands): Implications on the stability of steep-sided volcano flanks at oceanic islands. Earth and Planetary Science Letters, 2010, 297, 545-557.	1.8	51
15	Strain and stress fields along the Gibraltar Orogenic Arc: Constraints on active geodynamics. Gondwana Research, 2013, 23, 1071-1088.	3.0	51
16	Ground deformation in a viscoelastic medium composed of a layer overlying a half-space: a comparison between point and extended sources. Geophysical Journal International, 2000, 140, 37-50.	1.0	49
17	Gravityâ€driven deformation of Tenerife measured by InSAR time series analysis. Geophysical Research Letters, 2009, 36, .	1.5	47
18	Drought-driven transient aquifer compaction imaged using multitemporal satellite radar interferometry. Geology, 2011, 39, 551-554.	2.0	47

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19	New geodetic monitoring system in the volcanic island of Tenerife, Canaries, Spain. Combination of InSAR and GPS techniques. Journal of Volcanology and Geothermal Research, 2003, 124, 241-253.	0.8	43
20	Modeling the two- and three-dimensional displacement field in Lorca, Spain, subsidence and the global implications. Scientific Reports, 2018, 8, 14782.	1.6	42
21	The 3-D gravity inversion package GROWTH2.0 and its application to Tenerife Island, Spain. Computers and Geosciences, 2011, 37, 621-633.	2.0	39
22	Detection of displacements on Tenerife Island, Canaries, using radar interferometry. Geophysical Journal International, 2004, 160, 33-45.	1.0	38
23	Spatiotemporal analysis and interpretation of 1993–2013 ground deformation at Campi Flegrei, Italy, observed by advanced DInSAR. Geophysical Research Letters, 2014, 41, 6101-6108.	1.5	37
24	The Canary Islands hot spot: New insights from 3D coupled geophysical–petrological modelling of the lithosphere and uppermost mantle. Earth and Planetary Science Letters, 2015, 409, 71-88.	1.8	37
25	Inflation or deflation? New results for Mayon Volcano applying elastic-gravitational modeling. Geophysical Research Letters, 2001, 28, 2349-2352.	1.5	36
26	Removal of systematic seasonal atmospheric signal from interferometric synthetic aperture radar ground deformation time series. Geophysical Research Letters, 2014, 41, 6123-6130.	1.5	36
27	Real Time Tracking of Magmatic Intrusions by means of Ground Deformation Modeling during Volcanic Crises. Scientific Reports, 2015, 5, 10970.	1.6	36
28	Programs to compute deformation due to a magma intrusion in elastic-gravitational layered Earth models. Computers and Geosciences, 1997, 23, 231-249.	2.0	35
29	Spatiotemporal variations in vertical gravity gradients at the Campi Flegrei caldera (Italy): a case for source multiplicity during unrest?. Geophysical Journal International, 2006, 167, 1089-1096.	1.0	35
30	Modeling the density at Merapi volcano area, Indonesia, via the inverse gravimetric problem. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	1.0	34
31	Structural results for La Palma island using 3â€Ð gravity inversion. Journal of Geophysical Research, 2009, 114, .	3.3	33
32	Geodetic methods for detecting volcanic unrest: a theoretical approach. Bulletin of Volcanology, 1999, 60, 534-544.	1.1	32
33	Ground deformation in the Taupo Volcanic Zone, New Zealand, observed by ALOS PALSAR interferometry. Geophysical Journal International, 2011, 187, 147-160.	1.0	32
34	Detailed multidisciplinary monitoring reveals pre- and co-eruptive signals at Nyamulagira volcano (North Kivu, Democratic Republic of Congo). Bulletin of Volcanology, 2014, 76, 1.	1.1	31
35	Detection of volcanic unrest onset in La Palma, Canary Islands, evolution and implications. Scientific Reports, 2021, 11, 2540.	1.6	31
36	Source parameters of the 2008 Bukavu-Cyangugu earthquake estimated from InSAR and teleseismic data. Geophysical Journal International, 2011, 184, 934-948.	1.0	29

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37	Simultaneous inversion of surface deformation and gravity changes by means of extended bodies with a free geometry: Application to deforming calderas. Journal of Geophysical Research, 2011, 116, .	3.3	28
38	Viscoelastic displacement and gravity changes due to point magmatic intrusions in a gravitational layered solid earth. Geophysical Journal International, 2001, 146, 155-170.	1.0	27
39	Volcanic source inversion using a genetic algorithm and an elastic-gravitational layered earth model for magmatic intrusions. Computers and Geosciences, 2004, 30, 985-1001.	2.0	27
40	3D displacement field retrieved by integrating Sentinel-1 InSAR and GPS data: the 2014 South Napa earthquake. European Journal of Remote Sensing, 2016, 49, 1-13.	1.7	27
41	FORTRAN program to compute displacement, potential, and gravity changes resulting from a magma intrusion in a multilayered Earth model. Computers and Geosciences, 1994, 20, 461-510.	2.0	26
42	Joint interpretation of displacement and gravity data in volcanic areas. A test example: Long Valley Caldera, California. Geophysical Research Letters, 2001, 28, 1063-1066.	1.5	26
43	A new gravity inversion method for multiple subhorizontal discontinuity interfaces and shallow basins. Journal of Geophysical Research, 2011, 116, .	3.3	25
44	A-DInSAR Monitoring of Landslide and Subsidence Activity: A Case of Urban Damage in Arcos de la Frontera, Spain. Remote Sensing, 2017, 9, 787.	1.8	24
45	Surface deformation due to a strike-slip fault in an elastic gravitational layer overlying a viscoelastic gravitational half-space. Journal of Geophysical Research, 1996, 101, 3199-3214.	3.3	23
46	Horizontal viscoelastic-gravitational displacement due to a rectangular dipping thrust fault in a layered Earth model. Journal of Geophysical Research, 1996, 101, 13581-13594.	3.3	22
47	Deformation produced by a rectangular dipping fault in a viscoelastic-gravitational layered earth model. Part I: Thrust fault—FLTGRV and FLTGRH FORTRAN programs. Computers and Geosciences, 1996, 22, 735-750.	2.0	21
48	InSAR volcano and seismic monitoring in Spain. Results for the period 1992–2000 and possible interpretations. Optics and Lasers in Engineering, 2002, 37, 285-297.	2.0	21
49	Interpretation of tidal gravity anomalies in Lanzarote, Canary Islands. Journal of Geodynamics, 2001, 31, 341-354.	0.7	20
50	GPS Monitoring in the N-W Part of the Volcanic Island of Tenerife, Canaries, Spain: Strategy and Results. Pure and Applied Geophysics, 2004, 161, 1359-1377.	0.8	20
51	Geodetic Deformation versus Seismic Crustal Moment-Rates: Insights from the Ibero-Maghrebian Region. Remote Sensing, 2020, 12, 952.	1.8	20
52	Sensitivity test of the geodetic network in Las Cañadas Caldera, Tenerife, for volcano monitoring. Journal of Volcanology and Geothermal Research, 2000, 103, 393-407.	0.8	19
53	New Results at Mayon, Philippines, from a Joint Inversion of Gravity and Deformation Measurements. Pure and Applied Geophysics, 2004, 161, 1433-1452.	0.8	19
54	Site scale modeling of slow-moving landslides, a 3D viscoplastic finite element modeling approach. Landslides, 2018, 15, 257-272.	2.7	18

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55	Inverting the parameters of an earthquake-ruptured fault with a genetic algorithm. Computers and Geosciences, 1998, 24, 173-182.	2.0	16
56	On the interpretation of vertical gravity gradients produced by magmatic intrusions. Journal of Geodynamics, 2005, 39, 475-492.	0.7	16
57	Gravity changes from a stress evolution earthquake simulation of California. Journal of Geophysical Research, 2006, 111, .	3.3	16
58	Coseismic Horizontal Offsets and Fault-Trace Mapping Using Phase Correlation of IRS Satellite Images: The 1999 Izmit (Turkey) Earthquake. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 2242-2250.	2.7	16
59	On the relative importance of self-gravitation and elasticity in modeling volcanic ground deformation and gravity changes. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	15
60	Time Evolution of Deformation Using Time Series of Differential Interferograms: Application to La Palma Island (Canary Islands). Pure and Applied Geophysics, 2008, 165, 1531-1554.	0.8	15
61	Geodetic and Structural Research in La Palma, Canary Islands, Spain: 1992–2007 Results. Pure and Applied Geophysics, 2009, 166, 1461-1484.	0.8	15
62	Investigations on crustal thickness, heat flow and gravity tide relationship in Lanzarote Island. Physics of the Earth and Planetary Interiors, 1992, 74, 199-208.	0.7	13
63	Coseismic Three-Dimensional Displacements Determined Using SAR Data: Theory and an Application Test. Pure and Applied Geophysics, 2009, 166, 1403-1424.	0.8	13
64	GPS Monitoring of the Tropical Storm Delta along the Canary Islands Track, November 28-29, 2005. Pure and Applied Geophysics, 2009, 166, 1519-1531.	0.8	13
65	Using a Mesoscale Meteorological Model to Reduce the Effect of Tropospheric Water Vapour from DInSAR Data: A Case Study for the Island of Tenerife, Canary Islands. Pure and Applied Geophysics, 2012, 169, 1425-1441.	0.8	13
66	An Overview of Geodetic Volcano Research in the Canary Islands. Pure and Applied Geophysics, 2015, 172, 3189-3228.	0.8	12
67	Principal component analysis of MSBAS DInSAR time series from Campi Flegrei, Italy. Journal of Volcanology and Geothermal Research, 2017, 344, 139-153.	0.8	12
68	3D multi-source model of elastic volcanic ground deformation. Earth and Planetary Science Letters, 2020, 547, 116445.	1.8	12
69	Postseismic viscoelastic-gravitational half space computations: Problems and solutions. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	11
70	Threeâ€dimensional indirect boundary element method for deformation and gravity changes in volcanic areas: Application to Teide volcano (Tenerife, Canary Islands). Journal of Geophysical Research, 2007, 112, .	3.3	11
71	Some Insights into Topographic, Elastic and Self-gravitation Interaction in Modelling Ground Deformation and Gravity Changes in Active Volcanic Areas. Pure and Applied Geophysics, 2007, 164, 865-878.	0.8	11
72	Interpretation of 1992–1994 Gravity Changes around Mayon Volcano, Philippines, Using Point Sources. Pure and Applied Geophysics, 2007, 164, 733-749.	0.8	11

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73	Longâ€ŧerm versus shortâ€ŧerm deformation processes at Tenerife (Canary Islands). Journal of Geophysical Research, 2010, 115, .	3.3	11
74	Expanding maps, shrinking targets and hitting times. Nonlinearity, 2012, 25, 2443-2471.	0.6	11
75	An Upper Limit to Ground Deformation in the Island of Tenerife, Canary Islands, for the Period 1997–2006. Pure and Applied Geophysics, 2008, 165, 1049-1070.	0.8	10
76	Systematic InSAR monitoring of African active volcanic zones: What we have learned in three years, or an harvest beyond our expectations. , 2008, , .		10
77	Spatiotemporal gravity changes on volcanoes: Assessing the importance of topography. Geophysical Research Letters, 2009, 36, .	1.5	10
78	Suitability Assessment of X-Band Satellite SAR Data for Geotechnical Monitoring of Site Scale Slow Moving Landslides. Remote Sensing, 2018, 10, 936.	1.8	10
79	A revision of the FORTRAN codes GRAVW to compute deformation produced by a point magma intrusion in elastic-gravitational layered earth models. Computers and Geosciences, 2006, 32, 275-281.	2.0	9
80	Shear-wave Velocity Structure around Teide Volcano: Results Using Microtremors with the SPAC Method and Implications for Interpretation of Geodetic Results. Pure and Applied Geophysics, 2007, 164, 697-720.	0.8	9
81	Upgraded software for structural gravity inversion and application to El Hierro (Canary Islands). Computers and Geosciences, 2021, 150, 104720.	2.0	9
82	Topography and self-gravitation interaction in elastic-gravitational modeling. Geochemistry, Geophysics, Geosystems, 2007, 8, n/a-n/a.	1.0	8
83	Introduction to Mathematics and Geosciences: Global and Local Perspectives, Volume I. Pure and Applied Geophysics, 2015, 172, 1-5.	0.8	8
84	Joint Terrestrial and Aerial Measurements to Study Ground Deformation: Application to the Sciara Del Fuoco at the Stromboli Volcano (Sicily). Remote Sensing, 2016, 8, 463.	1.8	8
85	An improved data integration algorithm to constrain the 3D displacement field induced by fast deformation phenomena tested on the Napa Valley earthquake. Computers and Geosciences, 2017, 109, 206-215.	2.0	8
86	Deep volcanic morphology below Lanzarote, Canaries, from gravity inversion: New results for Timanfaya and implications. Journal of Volcanology and Geothermal Research, 2019, 369, 64-79.	0.8	8
87	Deeper understanding of non-linear geodetic data inversion using a quantitative sensitivity analysis. Nonlinear Processes in Geophysics, 2005, 12, 373-379.	0.6	8
88	Deformation produced by a rectangular dipping fault in a viscoelastic-gravitational layered earth model. Part II: Strike-slip fault—STRGRV and STRGRH FORTRAN programs. Computers and Geosciences, 1996, 22, 751-764.	2.0	7
89	Space- and Time-Dependent Probabilities for Earthquake Fault Systems from Numerical Simulations: Feasibility Study and First Results. Pure and Applied Geophysics, 2010, 167, 967-977.	0.8	7
90	Geodetic Study of the 2006–2010 Ground Deformation in La Palma (Canary Islands): Observational Results. Remote Sensing, 2020, 12, 2566.	1.8	7

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91	Tidal Influence on Seismic Activity During the 2011–2013 El Hierro Volcanic Unrest. Tectonics, 2021, 40, e2020TC006201.	1.3	7
92	A new approach to the monitoring of deformation on Lanzarote (Canary Islands): an 8-year radar perspective. Bulletin of Volcanology, 2003, 65, 1-7.	1.1	6
93	A gravity gradient method for characterizing the post-seismic deformation field for a finite fault. Geophysical Journal International, 2008, 173, 802-805.	1.0	6
94	Some comments on the effects of earth models on ground deformation modelling. Studia Geophysica Et Geodaetica, 1996, 40, 14-24.	0.3	5
95	New Results at Mayon, Philippines, from a Joint Inversion of Gravity and Deformation Measurements. , 2004, , 1433-1452.		5
96	A free-geometry geodynamic modelling of surface gravity changes using Growth-dg software. Scientific Reports, 2021, 11, 23442.	1.6	5
97	An Elliptical Model for Deformation Due to Groundwater Fluctuations. Pure and Applied Geophysics, 2012, 169, 1443-1456.	0.8	4
98	Moho depth determination beneath theÂZagros Mountains from 3D inversion of gravity data. Arabian Journal of Geosciences, 2018, 11, 1.	0.6	4
99	PAF: A software tool to estimate free-geometry extended bodies of anomalous pressure from surface deformation data. Computers and Geosciences, 2018, 111, 235-243.	2.0	4
100	GPS Monitoring in the N-W Part of the Volcanic Island of Tenerife, Canaries, Spain: Strategy and Results. , 2004, , 1359-1377.		4
101	Study of Volcanic Sources at Long Valley Caldera, California, Using Gravity Data and a Genetic Algorithm Inversion Technique. Pure and Applied Geophysics, 2004, 161, 1399-1413.	0.8	3
102	Postseismic Deformation Following the 1994 Northridge Earthquake Identified Using the Localized Hartley Transform Filter. Pure and Applied Geophysics, 2008, 165, 1577-1602.	0.8	3
103	On the interpretation of gravity tide residuals in the Iberian Peninsula. Journal of Geodynamics, 2008, 45, 18-31.	0.7	3
104	3D Stability Analysis of the Portalet Landslide Using Finite Element Method. , 2015, , 1519-1524.		3
105	Spatiotemporal Analysis of Ground Deformation at Campi Flegrei and Mt Vesuvius, Italy, Observed by Envisat and Radarsat-2 InSAR During 2003–2013. Lecture Notes in Earth System Sciences, 2014, , 377-382.	0.5	3
106	Radar Interferometry as a Monitoring Tool for an Active Mining Area Using Sentinel-1 C-Band Data, Case Study of Riotinto Mine. Remote Sensing, 2022, 14, 3061.	1.8	3
107	On the Mathematical Analysis of an Elastic-gravitational Layered Earth Model for Magmatic Intrusion: The Stationary Case. Pure and Applied Geophysics, 2008, 165, 1465-1490.	0.8	2

108 DINSAR, GPS and gravity observation results in La Palma, Canary islands. , 2008, , .

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109	An Update GPS Velocity and Strain Rate Fields for the Iberian Region. Lecture Notes in Earth System Sciences, 2014, , 369-372.	0.5	2
110	Application of multi-sensor advanced DInSAR analysis to severe land subsidence recognition: Alto GuadalentÃn Basin (Spain). Proceedings of the International Association of Hydrological Sciences, 0, 372, 45-48.	1.0	2
111	Interseismic Strain Accumulation Near Lisbon (Portugal) From Space Geodesy. Geophysical Research Letters, 2021, 48, .	1.5	2
112	Estimation of the Block Adjustment Error in UAV Photogrammetric Flights in Flat Areas. Remote Sensing, 2022, 14, 2877.	1.8	2
113	A Hybrid Model for the Summit Region of Merapi Volcano, Java, Indonesia, Derived from Gravity Changes and Deformation Measured between 2000 and 2002. Pure and Applied Geophysics, 2007, 164, 837-850.	0.8	1
114	Deformation and Gravity Change: Indicators of Isostasy, Tectonics, Volcanism and Climate Change. Introduction. Pure and Applied Geophysics, 2007, 164, 633-635.	0.8	1
115	Introduction: Linking Earth Sciences and Mathematics. Pure and Applied Geophysics, 2008, 165, 997-1001.	0.8	1
116	Introduction to Earth Sciences and Mathematics, Volume II. Pure and Applied Geophysics, 2008, 165, 1459-1463.	0.8	1
117	Surface deformation studies of Tenerife Island, Spain from joint GPS-DInSAR observations. , 2008, , .		1
118	Characterization of the distribution of water vapour for DInSAR studies on the volcanic island of Tenerife, Canary Islands. , 2009, , .		1
119	Deformation and Gravity Change: Indicators of Isostasy, Tectonics, Volcanism and Climate Change, Volume II. Introduction. Pure and Applied Geophysics, 2009, 166, 1165-1166.	0.8	1
120	3D analytical and numerical modelling of the regional topography influence on the surface deformation due to underground heat source. Contributions To Geophysics and Geodesy, 2011, 41, 251-265.	0.2	1
121	Deformation and Gravity Change: Indicators of Isostasy, Tectonics, Volcanism and Climate Change, Volume III. Introduction. Pure and Applied Geophysics, 2012, 169, 1329-1330.	0.8	1
122	Structure of Alluvial Valleys from 3-D Gravity Inversion: The Low Andarax Valley (AlmerÃa, Spain) Test Case. Pure and Applied Geophysics, 2015, 172, 3107-3121.	0.8	1
123	On the Construction of Bootstrap Confidence Intervals for Estimating the Correlation Between Two Time Series Not Sampled on Identical Time Points. Mathematical Geosciences, 2021, 53, 1813.	1.4	1
124	An Upper Limit to Ground Deformation in the Island of Tenerife, Canary Islands, for the Period 1997–2006. , 2008, , 1049-1070.		1
125	Geodetic and Structural Research in La Palma, Canary Islands, Spain: 1992–2007 Results. , 2009, , 1461-1484.		1
126	Geodetic and Geophysical Effects Associated with Seismic and Volcanic Hazards. Pure and Applied Geophysics, 2004, 161, 1301-1303.	0.8	0

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127	Modeling of Stress Changes at Mayon Volcano, Philippines. Pure and Applied Geophysics, 2007, 164, 819-835.	0.8	0
128	A general method for calculating co-seismic gravity changes in complex fault systems. Computers and Geosciences, 2008, 34, 1541-1549.	2.0	0
129	Optical satellite images for co-seismic horizontal offsets estimate and fault trace mapping using Phase-corr technique. , 2010, , .		0
130	Determinación geodésica del deslizamiento de falla para el terremoto de Lorca del 11 de Mayo de 2011 usando interferometrÃa radar y GPS. FÃsica De La Tierra, 2013, 24, .	0.1	0
131	Introduction to Mathematics and Geosciences: Global and Local Perspectives, Volume II. Pure and Applied Geophysics, 2016, 173, 731-737.	0.8	0
132	DETECCIÓN DEL INICIO DE REACTIVACIÓN VOLCÃNICA EN LA ISLA DE LA PALMA, ISLAS CANARIAS, Y ESTUDIO DE SU EVOLUCIÓN TEMPORAL. , 0, , .		0
133	Study of Volcanic Sources at Long Valley Caldera, California, Using Gravity Data and a Genetic Algorithm Inversion Technique. , 2004, , 1399-1413.		0
134	Shear-wave Velocity Structure around Teide Volcano: Results Using Microtremors with the SPAC Method and Implications for Interpretation of Geodetic Results. , 2007, , 697-720.		0
135	On the Mathematical Analysis of an Elastic-gravitational Layered Earth Model for Magmatic Intrusion: The Stationary Case. , 2008, , 1465-1490.		0
136	Postseismic Deformation Following the 1994 Northridge Earthquake Identified Using the Localized Hartley Transform Filter. , 2008, , 1577-1602.		0
137	Coseismic Three-Dimensional Displacements Determined Using SAR Data: Theory and an Application Test. , 2009, , 1403-1424.		0
138	Modeling of Stress Changes at Mayon Volcano, Philippines. , 2007, , 819-835.		0
139	Interpretation of 1992–1994 Gravity Changes around Mayon Volcano, Philippines, Using Point Sources. , 2007, , 733-749.		0