

**volume 118
number 5
May 2013**

Articles published online
1 May – 31 May 2013

**Journal of
Geophysical
Research
Solid Earth**



Journal of Geophysical Research Solid Earth

Volume 118 Number 5 May 2013
JGREA2(5) 1845–2634 (2013)
ISSN 2169–9313 (print); ISSN 2169–9356 (online)

The online article is the official version and may contain additional content not available in this print issue. To access the full article, including multimedia, enhanced figures, supporting information, and other nonprinted content, go to <http://wileyonlinelibrary.com/journal/jgrb>.

Geomagnetism and Paleomagnetism/Marine Geology and Geophysics

- 1845** *Andrew P. Roberts, Leonardo Sagnotti, Fabio Florindo, Steven M. Bohaty, Kenneth L. Veresub, Gary S. Wilson, and James C. Zachos*

Environmental magnetic record of paleoclimate, unroofing of the Transantarctic Mountains, and volcanism in late Eocene to early Miocene glaci-marine sediments from the Victoria Land Basin, Ross Sea, Antarctica
(doi 10.1002/jgrb.50151)

- 1862** *Robert S. Reece, Sean P. S. Gulick, Gail L. Christeson, Brian K. Horton, Harm van Avendonk, and Ginger Barth*
The role of farfield tectonic stress in oceanic intraplate deformation, Gulf of Alaska (doi 10.1002/jgrb.50177)

- 1873** *Pan Zhao, Yan Chen, Bei Xu, Michel Faure, Guanzhong Shi, and Flavien Choulet*
Did the Paleo-Asian Ocean between North China Block and Mongolia Block exist during the late Paleozoic?
First paleomagnetic evidence from central-eastern Inner Mongolia, China (doi 10.1002/jgrb.50198)

Chemistry and Physics of Minerals and Rocks/Volcanology

- 1895** *A. Costa, G. Wadge, R. Stewart, and H. Odber*

Coupled subdaily and multiweek cycles during the lava dome eruption of Soufrière Hills Volcano, Montserrat
(doi 10.1002/jgrb.50095)

- 1904** *Guijuan Lai, Hongkui Ge, and Weilai Wang*

Transfer functions of the well-aquifer systems response to atmospheric loading and Earth tide from low to high-frequency band (doi 10.1002/jgrb.50165)

- 1925** *Annalisa Cappello, Giuseppe Bilotta, Marco Neri, and Ciro Del Negro*

Probabilistic modeling of future volcanic eruptions at Mount Etna (doi 10.1002/jgrb.50190)

- 1936** *Ashley Gerard Davies, Steve Chien, Joshua Doubleday, Daniel Tran, Thorvaldur Thordarson, Magnús T. Gudmundsson, Ármann Höskuldsson, Steinunn S. Jakobsdóttir, Robert Wright, and Daniel Mandl*

Observing Iceland's Eyjafjallajökull 2010 eruptions with the autonomous NASA Volcano Sensor Web
(doi 10.1002/jgrb.50141)

- 1957** *Jörn H. Kruhl, Richard Wirth, and Luiz F. G. Morales*

Quartz grain boundaries as fluid pathways in metamorphic rocks (doi 10.1002/jgrb.50099)

- 1968** *Rachel J. Lee, Michael S. Ramsey, and Penelope L. King*

Development of a new laboratory technique for high-temperature thermal emission spectroscopy of silicate melts
(doi 10.1002/jgrb.50197)

- 1984** *F. Gutiérrez, I. Payacán, S. E. Gelman, O. Bachmann, and M. A. Parada*

Late-stage magma flow in a shallow felsic reservoir: Merging the anisotropy of magnetic susceptibility record with numerical simulations in La Gloria Pluton, central Chile (doi 10.1002/jgrb.50164)



0148-0227JB-118-5

- 1999** *Caitlin A. Murphy, Jennifer M. Jackson, and Wolfgang Sturhahn*
Experimental constraints on the thermodynamics and sound velocities of hcp-Fe to core pressures
(doi 10.1002/jgrb.50166)
- 2017** *Kyle Anderson and Paul Segall*
Bayesian inversion of data from effusive volcanic eruptions using physics-based models: Application to Mount St. Helens 2004–2008 (doi 10.1002/jgrb.50169)
- 2038** *Constantin Oltéan, Fabrice Golffier, and Michel Antoine Buès*
Numerical and experimental investigation of buoyancy-driven dissolution in vertical fracture
(doi 10.1002/jgrb.50188)
- 2049** *Arghya Das, Giang D. Nguyen, and Itai Einav*
The propagation of compaction bands in porous rocks based on breakage mechanics (doi 10.1002/jgrb.50193)
- 2067** *Kiyokazu Oohashi, Takehiro Hirose, and Toshihiko Shimamoto*
Graphite as a lubricating agent in fault zones: An insight from low- to high-velocity friction experiments on a mixed graphite-quartz gouge (doi 10.1002/jgrb.50175)
- 2085** *Matthew Rioux, Samuel Bowring, Peter Kelemen, Stacia Gordon, Robert Miller, and Frank Dudás*
Tectonic development of the Samail ophiolite: High-precision U-Pb zircon geochronology and Sm-Nd isotopic constraints on crustal growth and emplacement (doi 10.1002/jgrb.50139)

Seismology

- 2102** *M. A. Denolle, E. M. Dunham, G. A. Prieto, and G. C. Beroza*
Ground motion prediction of realistic earthquake sources using the ambient seismic field (doi 10.1029/2012JB009603)
- 2119** *B. R. Smithyman and R. M. Clowes*
Waveform tomography in 2.5D: Parameterization for crooked-line acquisition geometry (doi 10.1002/jgrb.50100)
- 2138** *David S. Heeszel, Douglas A. Wiens, Andrew A. Nyblade, Samantha E. Hansen, Masaki Kanao, Meijan An, and Yue Zhao*
Rayleigh wave constraints on the structure and tectonic history of the Gamburtsev Subglacial Mountains, East Antarctica (doi 10.1002/jgrb.50171)
- 2154** *Shingo Yoshida, Masao Nakatani, and Naoyuki Kato*
Recovery of plate coupling at a ruptured asperity (doi 10.1002/jgrb.50172)
- 2164** *L. A. Dominguez and P. M. Davis*
Seismic attenuation in the Middle America Region and the frequency dependence of intrinsic Q (doi 10.1002/jgrb.50163)
- 2176** *S. Pilia, N. Rawlinson, N. G. Direen, P. R. Cummins, and N. Balfour*
Structural controls on localized intraplate deformation and seismicity in Southern Australia: Insights from local earthquake tomography of the Flinders Ranges (doi 10.1002/jgrb.50168)
- 2191** *Jian Zhang and Xiaoning Yang*
Extracting surface wave attenuation from seismic noise using correlation of the coda of correlation (doi 10.1002/jgrb.50186)
- 2206** *T. Diehl, F. Waldhauser, J. R. Cochran, K. A. Kamesh Raju, L. Seeber, D. Schaff, and E. R. Engdahl*
Back-arc extension in the Andaman Sea: Tectonic and magmatic processes imaged by high-precision teleseismic double-difference earthquake relocation (doi 10.1002/jgrb.50192)
- 2225** *P. Dublanchet, P. Bernard, and P. Favreau*
Interactions and triggering in a 3-D rate-and-state asperity model (doi 10.1002/jgrb.50187)

- 2246** *Tsutomu Takahashi, Koichiro Obana, Yojiro Yamamoto, Ayako Nakanishi, Shuichi Kodaira, and Yoshiyuki Kaneda*
The 3-D distribution of random velocity inhomogeneities in southwestern Japan and the western part of the Nankai subduction zone (doi 10.1002/jgrb.50200)
- 2258** *G. Sriram, P. Dewangan, T. Ramprasad, and P. Rama Rao*
Anisotropic amplitude variation of the bottom-simulating reflector beneath fracture-filled gas hydrate deposit (doi 10.1002/jgrb.50176)
- 2275** *Robin S. Matzka, Peter M. Shearer, Guoqing Lin, Cecily J. Wolfe, and Paul G. Okubo*
Systematic relocation of seismicity on Hawaii Island from 1992 to 2009 using waveform cross correlation and cluster analysis (doi 10.1002/jgrb.50189)
- 2289** *Cemal B. Biryol, Garrett M. Leahy, George Zandt, and Susan L. Beck*
Imaging the shallow crust with local and regional earthquake tomography (doi 10.1002/jgrb.50115)
- 2307** *B. Tauzin, R. D. van der Hilst, G. Wittlinger, and Y. Ricard*
Multiple transition zone seismic discontinuities and low velocity layers below western United States (doi 10.1002/jgrb.50182)
- 2323** *Qiang Xu, Junmeng Zhao, Shunping Pei, and Hongbing Liu*
Imaging lithospheric structure of the eastern Himalayan syntaxis: New insights from receiver function analysis (doi 10.1002/jgrb.50162)
- 2333** *Youcui Tang, Y. John Chen, Shiyong Zhou, Jieyuan Ning, and Zhifeng Ding*
Lithosphere structure and thickness beneath the North China Craton from joint inversion of ambient noise and surface wave tomography (doi 10.1002/jgrb.50191)
- 2347** *Z. E. Ross and Y. Ben-Zion*
Spatio-temporal variations of double-couple aftershock mechanisms and possible volumetric earthquake strain (doi 10.1002/jgrb.50202)

Geodesy and Gravity/Tectonophysics

- 2356** *Uwe Walzer and Roland Hendel*
Real episodic growth of continental crust or artifact of preservation? A 3-D geodynamic model (doi 10.1002/jgrb.50150)
- 2371** *P. Tregoning, R. Burgette, S. C. McClusky, S. Lejeune, C. S. Watson, and H. McQueen*
A decade of horizontal deformation from great earthquakes (doi 10.1002/jgrb.50154)
- 2382** *E. Forootan, O. Didova, J. Kusche, and A. Löcher*
Comparisons of atmospheric data and reduction methods for the analysis of satellite gravimetry observations (doi 10.1002/jgrb.50160)
- 2397** *Julien Gazeaux, Simon Williams, Matt King, Machiel Bos, Rolf Dach, Manoj Deo, Angelyn W. Moore, Luca Ostini, Elizabeth Petrie, Marco Roggero, Felix Norman Teferle, German Olivares, and Frank H. Webb*
Detecting offsets in GPS time series: First results from the detection of offsets in GPS experiment (doi 10.1002/jgrb.50152)
- 2408** *Anatoli Ischuk, Rebecca Bendick, Anatoly Rybin, Peter Molnar, Shah Faisal Khan, Sergey Kuzikov, Solmaz Mohadjer, Umed Saydullaev, Zhyra Ilyasova, Gennady Schelochkov, and Alexander V. Zubovich*
Kinematics of the Pamir and Hindu Kush regions from GPS geodesy (doi 10.1002/jgrb.50185)
- 2417** *N. Castelletto, G. Gambolati, and P. Teatini*
Geological CO₂ sequestration in multi-compartment reservoirs: Geomechanical challenges (doi 10.1002/jgrb.50180)

- 2429** *E. Choi, E. Tan, L. L. Lavier, and V. M. Calo*
DynEarthSol2D: An efficient unstructured finite element method to study long-term tectonic deformation
(doi 10.1002/jgrb.50148)
- 2445** *Fred F. Pollitz, Aaron Wech, Honn Kao, and Roland Bürgmann*
Annual modulation of non-volcanic tremor in northern Cascadia (doi 10.1002/jgrb.50181)
- 2460** *Pei-Ling Wang, Simon E. Engelhart, Kelin Wang, Andrea D. Hawkes, Benjamin P. Horton, Alan R. Nelson, and Robert C. Witter*
Heterogeneous rupture in the great Cascadia earthquake of 1700 inferred from coastal subsidence estimates
(doi 10.1002/jgrb.50101)
- 2474** *C. Plattner, F. Amelung, S. Baker, R. Govers, and M. Poland*
The role of viscous magma mush spreading in volcanic flank motion at Kīlauea Volcano, Hawai‘i
(doi 10.1002/jgrb.50194)
- 2488** *Arash Mohajeri, Yaron Finzi, Hans Muhlhaus, and Gideon Rosenbaum*
Melt and shear interactions in the lithosphere: Theory and numerical analysis of pure shear extension
(doi 10.1002/jgrb.50183)
- 2500** *A. R. Amiri-Simkooei*
On the nature of GPS draconitic year periodic pattern in multivariate position time series (doi 10.1002/jgrb.50199)
- 2512** *Hiroshi Yarai and Shinzaburo Ozawa*
Quasi-periodic slow slip events in the afterslip area of the 1996 Hyuga-nada earthquakes, Japan
(doi 10.1002/jgrb.50161)
- 2528** *Paul W. Jewell and Ronald L. Bruhn*
Evaluation of Wasatch fault segmentation and slip rates using Lake Bonneville shorelines (doi 10.1002/jgrb.50174)
- 2544** *Peter Molnar and Gregory A. Houseman*
Rayleigh-Taylor instability, lithospheric dynamics, surface topography at convergent mountain belts, and gravity anomalies
(doi 10.1002/jgrb.50203)
- 2558** *Diane E. Moore and David A. Lockner*
Chemical controls on fault behavior: Weakening of serpentinite sheared against quartz-bearing rocks and its significance for fault creep in the San Andreas system (doi 10.1002/jgrb.50140)
- 2571** *S. K. Ebmeier, J. Biggs, T. A. Mather, and F. Amelung*
On the lack of InSAR observations of magmatic deformation at Central American volcanoes (doi 10.1002/jgrb.50195)
- 2586** *J. C. Afonso, J. Fullea, W. L. Griffin, Y. Yang, A. G. Jones, J. A. D. Connolly, and S. Y. O'Reilly*
3-D multiobservable probabilistic inversion for the compositional and thermal structure of the lithosphere and upper mantle. I: *a priori* petrological information and geophysical observables (doi 10.1002/jgrb.50124)
- 2618** *Linguo Yuan, Benjamin Fong Chao, Xiaoli Ding, and Ping Zhong*
The tidal displacement field at Earth's surface determined using global GPS observations (doi 10.1002/jgrb.50159)
- 2633** *N. K. Pavlis, S. A. Holmes, S. C. Kenyon, and J. K. Factor*
Correction to “The Development and Evaluation of the Earth Gravitational Model 2008 (EGM2008)”
(doi 10.1002/jgrb.50167)