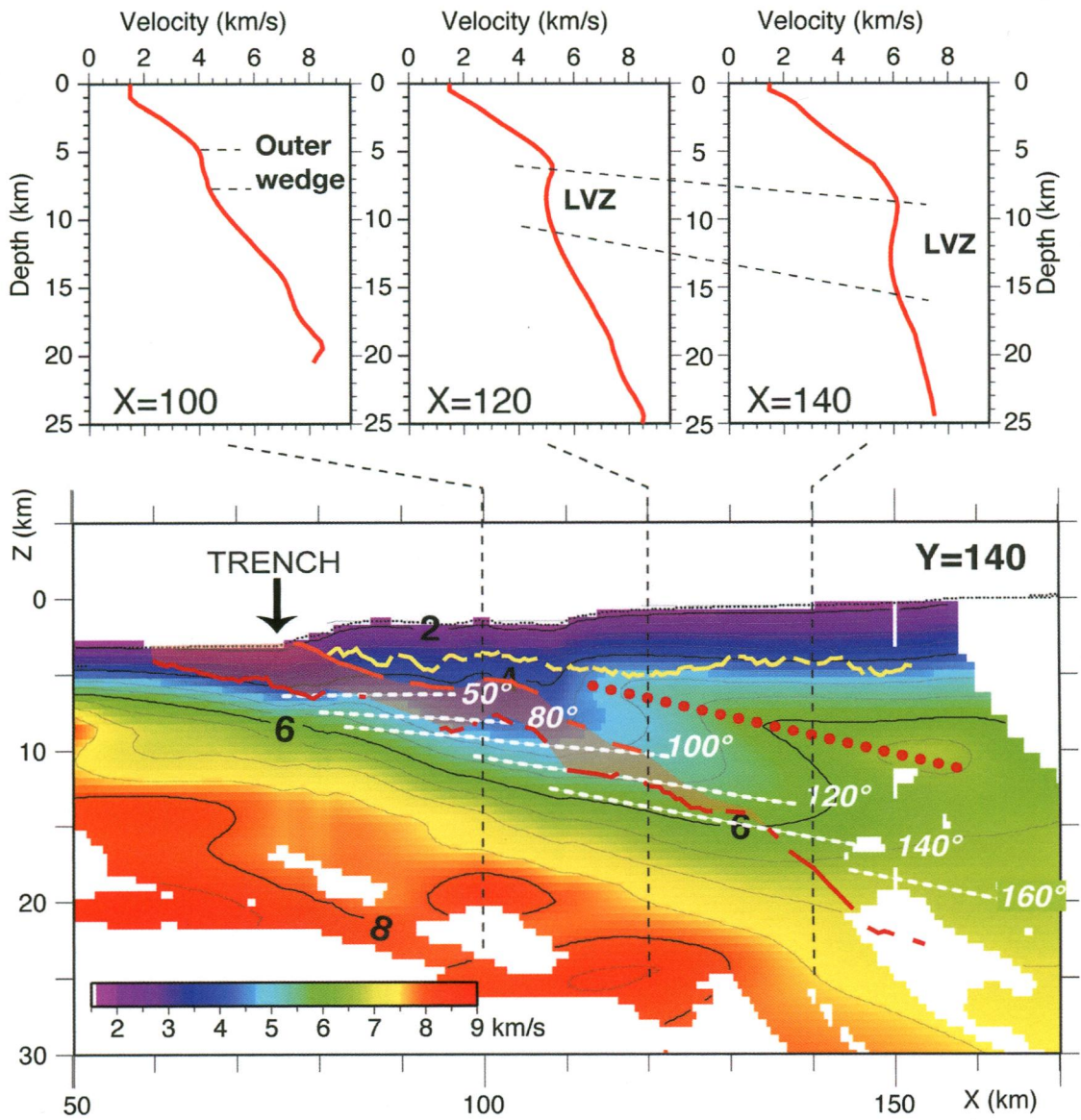


nu  
J80/gr



# Journal of Geophysical Research Solid Earth

Volume 119 Issue 2 February 2014

JGREA2(2) 767–1530 (2014)

ISSN 2169-9313 (print); ISSN 2169-9356 (Online)

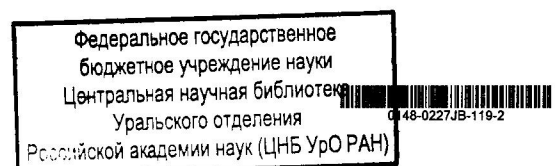
The online article is the official version and may contain additional content not available in this print issue. To access the full article, including multimedia, enhanced figures, supporting information, and other nonprinted content, go to <http://wileyonlinelibrary.com/journal/jgrb>.

## Geomagnetism and Paleomagnetism/Marine Geology and Geophysics

- 767** *Delphine Roubinet and James Irving*  
Discrete-dual-porosity model for electric current flow in fractured rock (doi 10.1002/2013JB010668)
- 787** *Kai Schumann, Michael Stipp, Jan H. Behrmann, Dirk Klaeschen, and Detlef Schulte-Kortnack*  
P and S wave velocity measurements of water-rich sediments from the Nankai Trough, Japan (doi 10.1002/2013JB010290)
- 806** *Zhiyong Li, Jianping Zheng, Qingli Zeng, Qingsheng Liu, and W. L. Griffin*  
Magnetic mineralogy of pyroxenite xenoliths from Hannuoba basalts, northern North China Craton: Implications for magnetism in the continental lower crust (doi 10.1002/2013JB010599)
- 822** *Claire W. Pontbriand and Robert A. Sohn*  
Microearthquake evidence for reaction-driven cracking within the Trans-Atlantic Geotraverse active hydrothermal deposit (doi 10.1002/2013JB010110)

## Chemistry and Physics of Minerals and Rocks/Volcanology

- 840** *Miki Tasaka, Takehiko Hiraga, and Katsuyoshi Michibayashi*  
Influence of mineral fraction on the rheological properties of forsterite + enstatite during grain size sensitive creep: 3. Application of grain growth and flow laws on peridotite ultramylonite (doi 10.1002/2013JB010619)
- 858** *Antonella Amoroso, Luca Crescentini, and Ilaria Sabbetta*  
Paired deformation sources of the Campi Flegrei caldera (Italy) required by recent (1980–2010) deformation history (doi 10.1002/2013JB010392)
- 880** *Ioannis Stefanou and Jean Sulem*  
Chemically induced compaction bands: Triggering conditions and band thickness (doi 10.1002/2013JB010342)
- 900** *M. Herwegh, T. Poulet, A. Karrech, and K. Regenauer-Lieb*  
From transient to steady state deformation and grain size: A thermodynamic approach using elasto-visco-plastic numerical modeling (doi 10.1002/2013JB010701)
- 919** *Atsuko Namiki and Takanori Kagoshima*  
Intermittent and efficient outgassing by the upward propagation of film ruptures in a bubbly magma (doi 10.1002/2013JB010576)
- 936** *R. H. Brzesowsky, C. J. Spiers, C. J. Peach, and S. J. T. Hangx*  
Time-independent compaction behavior of quartz sands (doi 10.1002/2013JB010444)
- 957** *E. Walker, P. W. J. Glover, and J. Ruel*  
A transient method for measuring the DC streaming potential coefficient of porous and fractured rocks (doi 10.1002/2013JB010579)
- 971** *Saswata Hier-Majumder, Ellen B. Keel, and Anna M. Courtier*  
The influence of temperature, bulk composition, and melting on the seismic signature of the low-velocity layer above the transition zone (doi 10.1002/2013JB010314)
- 984** *L. Neveux, D. Grgic, C. Carpentier, J. Pironon, L. Truche, and J. P. Girard*  
Experimental simulation of chemomechanical processes during deep burial diagenesis of carbonate rocks (doi 10.1002/2013JB010516)



## Seismology

- 1008** *A. McGarr*  
Maximum magnitude earthquakes induced by fluid injection (doi 10.1002/2013JB010597)
- 1020** *Daniel W. Zietlow, Anne F. Sheehan, Peter H. Molnar, Martha K. Savage, Greg Hirth, John A. Collins, and Bradford H. Hager*  
Upper mantle seismic anisotropy at a strike-slip boundary: South Island, New Zealand (doi 10.1002/2013JB010676)
- 1041** *Lina Constanza García Cano, Audrey Galve, Philippe Charvis, and Boris Marcaillou*  
Three-dimensional velocity structure of the outer fore arc of the Colombia-Ecuador subduction zone and implications for the 1958 megathrust earthquake rupture zone (doi 10.1002/2012JB009978)
- 1061** *Weilai Wang, Jianping Wu, Lihua Fang, Guijuan Lai, Ting Yang, and Yan Cai*  
S wave velocity structure in southwest China from surface wave tomography and receiver functions (doi 10.1002/2013JB010317)
- 1079** *G. Burgos, J.-P. Montagner, E. Beucler, Y. Capdeville, A. Mocquet, and M. Drilleau*  
Oceanic lithosphere-asthenosphere boundary from surface wave dispersion data (doi 10.1002/2013JB010528)
- 1094** *Xin Liu, Dapeng Zhao, and Sanzhong Li*  
Seismic attenuation tomography of the Northeast Japan arc: Insight into the 2011 Tohoku earthquake ( $M_w$  9.0) and subduction dynamics (doi 10.1002/2013JB010591)
- 1119** *A. F. Arnulf, A. J. Harding, G. M. Kent, S. C. Singh, and W. C. Crawford*  
Constraints on the shallow velocity structure of the Lucky Strike Volcano, Mid-Atlantic Ridge, from downward continued (doi 10.1002/2013JB010500)
- 1145** *Keehoon Kim, Jonathan M. Lees, and Mario C. Ruiz*  
Source mechanism of Vulcanian eruption at Tungurahua Volcano, Ecuador, derived from seismic moment tensor inversions (doi 10.1002/2013JB010590)
- 1165** *Yojiro Yamamoto, Koichiro Obana, Shuichi Kodaira, Ryota Hino, and Masanao Shinohara*  
Structural heterogeneities around the megathrust zone of the 2011 Tohoku earthquake from tomographic inversion of onshore and offshore seismic observations (doi 10.1002/2013JB010582)
- 1181** *Luca D'Auria, Bruno Massa, and Ada De Matteo*  
The stress field beneath a quiescent stratovolcano: The case of Mount Vesuvius (doi 10.1002/2013JB010792)
- 1200** *J. S. Buehler and P. M. Shearer*  
Anisotropy and  $V_p/V_s$  in the uppermost mantle beneath the western United States from joint analysis of  $P_n$  and  $S_n$  phases (doi 10.1002/2013JB010559)
- 1220** *C. Langenbruch and S. A. Shapiro*  
Gutenberg-Richter relation originates from Coulomb stress fluctuations caused by elastic rock heterogeneity (doi 10.1002/2013JB010282)
- 1235** *Joan Gomberg and Brian Sherrod*  
Crustal earthquake triggering by modern great earthquakes on subduction zone thrusts (doi 10.1002/2012JB009826)
- 1251** *Madhur Johri, Eric M. Dunham, Mark D. Zoback, and Zijun Fang*  
Predicting fault damage zones by modeling dynamic rupture propagation and comparison with field observations (doi 10.1002/2013JB010335)
- 1273** *Brian Sherrod and Joan Gomberg*  
Crustal earthquake triggering by pre-historic great earthquakes on subduction zone thrusts (doi 10.1002/2013JB010635)
- 1295** *J. B. Tary, M. van der Baan, and D. W. Eaton*  
Interpretation of resonance frequencies recorded during hydraulic fracturing treatments (doi 10.1002/2013JB010904)
- 1316** *Vahe Gabuchian, Ares J. Rosakis, Nadia Lapusta, and David D. Oglesby*  
Experimental investigation of strong ground motion due to thrust fault earthquakes (doi 10.1002/2013JB010409)

## Geodesy and Gravity/Tectonophysics

- 1337** *Rong Zou, Jeffrey T. Freymueller, Kaihua Ding, Shaomin Yang, and Qi Wang*  
Evaluating seasonal loading models and their impact on global and regional reference frame alignment (doi 10.1002/2013JB010186)

- 1359** *A. Walpersdorf, I. Manighetti, Z. Mousavi, F. Tavakoli, M. Vergnolle, A. Jadidi, D. Hatzfeld, A. Aghamohammadi, A. Bigot, Y. Djamour, H. Nankali, and M. Sedighi*  
Present-day kinematics and fault slip rates in eastern Iran, derived from 11 years of GPS data (doi 10.1002/2013JB010620)
- 1384** *K. Czarnota, G. G. Roberts, N. J. White, and S. Fishwick*  
Spatial and temporal patterns of Australian dynamic topography from River Profile Modeling (doi 10.1002/2013JB010436)
- 1425** *Marc A. Hesse and Georg Stadler*  
Joint inversion in coupled quasi-static poroelasticity (doi 10.1002/2013JB010272)
- 1446** *Isabelle Coutand, David M. Whipp Jr., Djordje Grujic, Matthias Bernet, Maria Giuditta Fellin, Bodo Bookhagen, Kyle R. Landry, S. K. Ghalley, and Chris Duncan*  
Geometry and kinematics of the Main Himalayan Thrust and Neogene crustal exhumation in the Bhutanese Himalaya derived from inversion of multithermochronologic data (doi 10.1002/2013JB010891)
- 1482** *Alejandro Gonzalez-Ortega, Yuri Fialko, David Sandwell, F. Alejandro Nava-Pichardo, John Fletcher, Javier Gonzalez-Garcia, Brad Lipovsky, Michael Floyd, and Gareth Funning*  
El Mayor-Cucapah ( $M_w$  7.2) earthquake: Early near-field postseismic deformation from InSAR and GPS observations (doi 10.1002/2013JB010193)
- 1498** *Richard D. Ray and Svetlana Y. Erofeeva*  
Long-period tidal variations in the length of day (doi 10.1002/2013JB010830)
- 1510** *Sabine A. M. den Hartog and Christopher J. Spiers*  
A microphysical model for fault gouge friction applied to subduction megathrusts (doi 10.1002/2013JB010580)

---

**Cover.** This 2D slice perpendicular to the trench and the velocity versus depth curves sampling the subduction zone at different offsets show the presence of a low velocity gradient outer wedge and a low velocity zone in the margin above the décollement (orange line). Their 3D extension we derived from our 3D velocity model has implication on the dynamic of the rupture of the 1958 and 1979 megathrust earthquakes and highlights the presence of subduction processes we develop in the text.