


GeoPRISMS Synthesis & Integration Theoretical and Experimental Institute

Menger Hotel, San Antonio, TX

February 27 - March 1, 2019

- Poster list -

First author name	co-author(s)	poster title	Poster ID #
Abers	Geoff	A.N. Adams, P.J. Haeussler, E.Roland, P.J. Shore, D. A. Wiens, S.Y. Schwartz, A.F. Sheehan, D.J. Shillington, S. Webb, L.L. Worthington	AACSE: The Alaska Amphibious Community Seismic Experiment A 99
Andrys	Janine	K. Kelley, E. Cottrell, M. Coombs	Volatile contents of Western Aleutian magmas and their relationship to slab thermal structure B 1
Beaudoin	Grace	J. Barnes, T. John	From AOC to eclogite: Halogen behavior during devolatilization in the forearc B 2
Bécel	Anne	B. Davis, J. Gibson, B. Shuck, H. Van Avendonk	New constraints on the final stages of breakup and early spreading history of the Eastern North American Margin from MCS data of the Community Seismic Experiment A 36
Belzer	Benjamin	M. French	Constitutive behavior of chlorite-rich fault gouge under hydrothermal conditions A 37
Biemiller	James	L. Wallace, S. Ellis, T. Little, M. Mizera, L. Lavier, S. Webber, F. Taylor, C. Chen, Y. Chou	Short- and long-term deformation styles on an active low-angle normal fault: Mai'iu fault, Papua New Guinea A 38
Blank	David	J. Morgan	Precursory stress changes and fault dilation lead to fault rupture: Insights from Discrete Element Simulations A 39
Bodmer	Miles	D.R. Toomey, J.J. Roering, L. Karlstrom	Does subslab buoyancy govern segmentation of Cascadia's forearc topography? A 40
Buck	W. Roger	B. Oryan	Preliminary attempts to relate seismic coupling of shallow megathrusts to upper plate extension through changes in pore pressure A 41
Cai	Chen	Doug Wiens (presenter) W. Shen, M. Eimer	Mariana subduction zone water input estimated from broadband ocean-bottom seismic data B 33
Carbotte	Suzanne	J.P. Canales, S. Han, A. Calvert, M. Nedimovic, C. Goldfinger, H. Tobin, A. Trehu	Plans for a new long-offset multi-channel seismic experiment of the Cascadia Subduction Zone in summer 2020 A 42
Carchedi	Christopher	J. Gaherty, D. Shillington, N. Accardo, C. Scholz, P. Chindandali, R. Ferdinand, A. Nyblade	Investigating short-period microseisms near Lake Malawi using a broadband array of onshore and lake-bottom seismometers A 43
Chiasera	Brandon	T.O. Rooney, I. Bastow, G. Yirgu, E. Grosfils, D. Ayalew, P. Mohr, J. Zimelman, M. Ramsey	Geochemically constraining the depth of the lithosphere-asthenosphere boundary in the Central Main Ethiopian Rift System B 3
Conder	James	A. Butler	Numerical modeling of great earthquakes on the seismogenic zone A 44
de Sagazan	Clément	J-A. Olive	Feedbacks between sedimentation, normal faulting, and magmatic accretion at the Andaman Sea spreading center A 45
Delph	Jonathan	K. Shimizu, B. Ratschbacher, D. Rasmussen, X. Pu	Insights into the architecture of active continental arcs from geochemical and seismic data B 5


GeoPRISMS Synthesis & Integration Theoretical and Experimental Institute

Menger Hotel, San Antonio, TX

February 27 - March 1, 2019

- Poster list -

First author name	co-author(s)	poster title	Poster ID #	
Droof	Connor	J. Freymueller, S. Li	New constraints on volcanic inflation and trench behavior around Mt. Veniaminof, Alaska from GPS campaign measurements	A 46
Ducatte	Alexandra	W.R. Nelson, E. Pitcavage, E. Barijaijo, P. Kalegga Kulyanyingi, T. Furman	Evaluating the origin of pyroxenite xenoliths in the East African Rift System via Re-Os isotopes and highly-siderophile elements	B 6
Dufek	Josef	G. Eggers, N. Andersen	Using magma dynamics models to integrate geochemical and geophysical data in a process-based framework	B 7
Ebinger	Cynthia	S.J. Oliva, TQH Pham, S. Henderson, K. Peterson, P. Chindandali, R. Gallacher, F. Illsley-Kemp, N. Accardo, G. Mulibo, R. Wambura-Ferdinand, G. Mbogoni, D. Shillington, J. Gaherty, A. Nyblade	Geometry and kinematics of active faults in the magma-poor Malawi rift, East Africa	A 47
Eilon	Zachary	J. Petruska, K. Keranen	New constraints on the East African rift from axis to flank using a combination of seismic data types	B 8
Emishaw	Luelseged	M.G. Abdelsalam	Depth and time dependence of strain partitioning in the development of late Jurassic – early Paleogene and Neogene - Quaternary extensional structures within the Turkana depression, East Africa	A 48
Emry	Erica	Y. Shen, A. Nyblade, A. Flinders, X. Bao	Upper mantle structure beneath the East African Rift System from full-wave ambient noise tomography	A 49
Estep	Justin	B. Reece, D. Kardell, G. Christeson, R. Carlson	Seismic layer 2A: Evolution and thickness from 0-70 Ma crust in the slow-intermediate spreading South Atlantic	B 9
Fliedner	Céline	M. French	Seismic wave propagation in Orocopia schist	A 50
Gaherty	James	D. Shillington, E. Hopper, B. Holtzman, C. Havlin, N. Accardo, G Jin	Presence and role of partial melt in continental rifting	A 52
Gase	Andrew	H. Van Avendonk, N. Bangs, D. Okaya, S. Henrys, D. Barker, K. Jacobs, S. Kodaira, G. Fujie, A. Arnulf	Crustal structure of the northern Hikurangi margin from marine seismic reflection imaging and onshore-offshore seismic tomography: implications for megathrust heterogeneity and overpressure in a region of shallow slow earthquakes	A 53
Ha	Goeun	L. Montesi, W. Zhu	Effect of thermally-controlled permeability barriers on the location of arc volcanism at subduction zones	B 10
Han	Shuoshuo	N. Bangs, J. Edwards, H. Tobin, G. Moore, E. Silver	3D seismic images of double BSRs at the northern Hikurangi margin and the implications for subduction processes	A 56
Han	Liang	John A. Hole (presenter), R.P. Lowell, J.M. Stock, G. F. Fuis	The effects of thick sediment upon continental breakup: Kinematic and thermal modeling of the Salton Trough, southern California	A 61
Harris	Robert	A. Trehu, H. Rabinowitz	Variations in the apparent coefficient of friction, Hikurangi margin, New Zealand	A 57
Harvey	Kayleigh	P.G. Starr, S. Walker, S. Penniston-Dorland, M.J. Kohn, E. Baxter	Hot slab time machine: Petrochronologic evidence for protracted amphibolite-facies metamorphism of the Catalina Schist (Santa Catalina Island, CA)	A 60


GeoPRISMS Synthesis & Integration Theoretical and Experimental Institute

Menger Hotel, San Antonio, TX

February 27 - March 1, 2019

- Poster list -

First author name	co-author(s)	poster title	Poster ID #
Haynie Kirstie	M.A. Jadamec	Revisiting the 1964 Great Alaska Earthquake in a slab-driven forearc Sliver-escape tectonics framework	A 58
Heywood Luan	L.J. Heywood, Susan DeBari (presenter), S.M. Straub, J.B. Gill, J.C. Schindlbeck, D.R Escobar	Recontextualization of across-arc signatures in the Izu Bonin arc, linking mafic to felsic magmatism across the arc	B 100
Hightower Erin	M. Gurnis, H. Van Avendonk, J. Stock, S. Gulick, R. Sutherland, B. Shuck	Gravitational modeling of crustal structure and composition of the Puysegur Margin, South Island, New Zealand: Insights into subduction initiation	A 59
Hoggard Mark	K. Czarnota, F. Richards, D. Huston, L. Jaques	Billion-year stability of cratonic edges controls location of global sediment-hosted metals	B 11
Hoover William	S. Penniston-Dorland, P. Piccoli	Low-salinity fluids in an intra-slab shear zone: Insights into fluid salinity from apatite in the Monviso Ophiolite (Western Alps)	B 12
Hyndman Roy		Slow slip and tremor: A review of the role of water expelled from subducting plate	A 62
Ide Satoshi		Slow earthquakes worldwide: Database and interpretation with the science of Slow Earthquakes Project	A 63
Ishimwe Felix	T. Rooney, A. Steiner	Potential causes of crystal-melt disequilibrium in Karisimbi lava	B 13
Ito Garrett	G. Moore	Width of imbricated thrust blocks and the strength of accreting sediments at submarine wedges	A 64
Jammes Suzon	L. Lavier	Effect of contrasting strength from inherited crustal fabric on the development of rifting margins: The example of the Northeastern Canadian margin	A 65
Janiszewski Helen	L. Wagner, D. Roman	Receiver function imaging of magmatic- and subduction-related structures beneath arc volcanoes: A case study at Cleveland Volcano, Alaska	A 66
Jeppson Tamara	H. Kitajima	Lithology and cement controls on the evolution of compressional wave velocity and porosity in input materials at northern Sumatra and other subduction zones	A 67
Jones Meghan	S.A Soule, A. Woods, K.E. Fauria, R. Carey, J.T. Perron, M. Manga	Pyroclast transport dynamics during the 2012 eruption of Havre Volcano (Kermadec Arc)	B 14
Kardell Dominik	G.L. Christeson, R.S. Reece	Structure of upper oceanic crust in the western South Atlantic using full-waveform velocity modeling	B 15
Kent Adam	C. Till, K. Cooper	The initiation of volcanic eruptions	B 16
Kenyon Lindsey	I. Wada	Implications of subduction obliquity to the inferences of seismic anisotropy in the mantle wedge	A 68


GeoPRISMS Synthesis & Integration Theoretical and Experimental Institute

Menger Hotel, San Antonio, TX

February 27 - March 1, 2019

- Poster list -

First author name	co-author(s)	poster title	Poster ID #	
Kotowski	Alissa	E. Bos Orent, M. Cloos	Preliminary petrologic and microstructural characterization of a metamorphic section beneath the Samail (Oman) Ophiolite: Results from the Oman Drilling Project Hole BT1B	A 69
Kuo	Szu-Ting	H. Kitajima, M. Kitamura	Experimental constraints on mechanical behaviors of the inner accretionary prism sediments at the Nankai subduction zone	A 70
Laó-Dávila	Daniel	E.A. Atekwana, M.G. Abdelsalam, P.R.N. Chindandali, F. Kolawole, S.G. Johnson, S.M. Dawson	The IRES Malawi Rift Project: Synthesis and future directions	A 71
Liu	Yiduo	J. Suppe	The second half of plate tectonics: 3-D mapping of the remnant "Paleo-Pacific" slabs in the lower mantle under East Asia and its tectonic implications	A 72
Long	Maureen	M.H. Benoit, R.L. Evans, S.D. King, E.Kirby, J.Aragon	Structure, dynamics, and evolution of the Eastern North American Margin: Results from the MAGIC project, Central Appalachians	A 73
Lubbers	Jordan	A. Kent	Diffusion chronometry in sanidine: Helping unravel thermal histories of large silicic magma reservoirs	A 74
Lynner	Colton	T. Guajardo, H. Janiszewski, Z. Eilon	Tilt and compliance corrections for the ENAM broadband OBS instruments	A 75
Magni	Valentina		The effects of back-arc spreading on arc magmatism	A 76
Martinez	Fernando	J. Conder, J. Caplan-Auerbach	Northern Lau Basin tectonics and volcanism along a propagating slab tear	A 77
Monteleone	Vanessa	T.A. Minshull, H. Marín Moreno	Rifting evolution of the Eastern Black Sea Basin from long-offset seismic reflection data	A 78
Morgan	Julia	Shipboard Scientists from IODP Expeditions 372 and 375	Seafloor overthrusting creates ductilely deformed fault rocks in marine sediments at the Hikurangi Margin: Implications for fault zone evolution and mechanics at IODP Site U1518	A 102
Morris	Rebecca	Susan DeBari (presenter), C. Busby, S. Medynski	Building arc crust – plutonic to volcanic connections in an extensional oceanic arc, the Alisitos arc crustal section (southern Rosario segment), Baja California	B 4
Muirhead	James	T. Fischer, A. Laizer, A. Zafu, H. Lee, S. Oliva, R. Pik, B. Marty, E. Judd, E. Kazimoto, M. Broadley, G. Kianji, D. Ayalew, A. Caracausi, C. Ebinger	How does diffuse CO ₂ flux vary across the East African Rift System?	B 17
Muth	Michelle	P.J. Wallace, K.J. Walowski	The role of slab melts in the sulfur content, metal content, and oxidation state of primitive arc magmas in the Southern Cascades	B 18
Newman	Andrew	T. Hobbs, C. Kyriakopoulos, L. Feng, M. Protti, T. Dixon	Completing the megathrust cycle	A 79
Obana	Koichiro	Y. Nakamura, G. Fujie, S. Miura, S. Kodaira	Seismicity and seismic velocity structure around the trench axis and outer rise region along the Japan Trench	A 80


GeoPRISMS Synthesis & Integration Theoretical and Experimental Institute

Menger Hotel, San Antonio, TX

February 27 - March 1, 2019

- Poster list -

First author name	co-author(s)	poster title	Poster ID #
Oliva Sarah Jaye	C.J. Ebinger, C. Wauthier, J.D. Muirhead, S.W. Roecker, E. Rivalta, S. Heimann	Insights into fault-magma interactions in an early-stage continental rift from source mechanisms and correlated volcano-tectonic earthquakes	A 98
Olsen Kelly	N. Bangs, A. Trehu, E. Contreras-Reyes	Heterogeneous upper plate extension in South Central Chile and implications for megathrust fault development	A 81
Oryan Bar	W.R. Buck	How shallowing slab dip could produce extensional upper plate earthquakes after a megathrust earthquake?	A 82
Owens Mary Grace	T. Rooney, A. Steiner, B. Chiasera, P. Wallace	Magma and volatile composition of South Island, Turkana	B 19
Parnell-Turner Ross	N. White, T. Henstock, J. MacLennan, S. Jones, B. Murton	Crustal formation and plume pulsing in the North Atlantic Ocean	B 23
Peterson Liam	T. Rooney, A. Steiner, J. Kappelman	Crossing the gap: Linking the Eocene and Oligocene East African Rift Volcanics	B 20
Phillips Rayn	T. Rooney, A. Steiner, G. Girard, J. Kappelman	Spatial distribution of the Amaro and Gamo basalts: Geochemical analysis of the rocks of the Omo River Project	B 21
Pu Xiaofei	R. Lange, G. Moore	New olivine-melt Ni thermometer for hydrous basalts and its application to reveal variations in lithospheric thickness in Western Mexico	B 22
Russell Joshua	J.B. Gaherty	Surface-wave anisotropy of the Eastern North American Margin (ENAM)	A 83
Sas May	N. Kawasaki, N. Sakamoto, P. Shane, G. Zellmer, H. Yurimoto	$\delta^{18}\text{O}$ records in quartz from Okataina volcano, New Zealand: Insights into the evolution of a large and dynamic silicic system	B 24
Savage Brian	Y. Shen, B. Covellone	Body and surface wave tomography of Eastern North American	A 84
Schlieder Tyler	K.M. Cooper, A.J.R. Kent, D. Gravelly, C. Deering	Quantifying magma storage timescales and thermal histories for the ~25 ka Oruanui and 1.8 ka Taupo eruptions of the Taupo Volcanic Center, New Zealand	B 25
Scholl David	R. Stern, G. Barth, D. Scheirer, K. Martin, M. Malkowski, J. Barron	IODP drilling to test end-member ideas about the origin of the Aleutian subduction zone and backarc Bering Sea Region	A 85
Schwartz Darin	V.D. Wanless	Upper mantle heterogeneity: Depleted source signature preserved in melt inclusions at coaxial segment of the Juan de Fuca Ridge	B 26
Shephard Grace	C. Gaina, T. Torsvik, J.I. Faleide	Plate tectonics and mantle structure of the Arctic, North Atlantic and Panthalassa: Recent updates	A 86
Shillington Donna	E. Hopper, N. Accardo, J. Gaherty, C. Scholz, A. Nyblade, C. Ebinger, C. Carchedi, A. Grijalva, D. Borrego, P. Chindandali, R. Ferdinand	Seismic imaging of variations in extension with depth and along-strike in the magma-poor Malawi Rift	A 87


GeoPRISMS Synthesis & Integration Theoretical and Experimental Institute

Menger Hotel, San Antonio, TX

February 27 - March 1, 2019

- Poster list -

First author name	co-author(s)	poster title	Poster ID #	
Shuck	Brandon	Sean Gulick (presenter), H. van Avendonk, M. Gurnis, J. Stock, R. Sutherland, E. Hightower, J. Patel	From rifting to subduction: Subduction initiation at the Puysegur Trench, New Zealand	A 55
Shuck	Brandon	H. Van Avendonk	The role of mantle melts in the protracted breakup of Pangea	A 88
Sim	Shi Joyce	M. Spiegelman, C. Wilson, D. Stegman	A focus on melt focusing	B 101
Smye	Andrew	L.L. Lavier, T. Zack, D.F. Stockli	Episodic heating of continental lower crust during rifting	A 89
Stamps	D. Sarah	A. Nyblade, E. Njinju, C. Bressers, G. Kianji, F. Tugume	Towards quantifying plume-lithosphere interactions from GNSS geodesy, seismology, and geodynamic modeling	A 90
Steiner	Alex	T. Rooney, E. Micuda	Rupturing paradigms of continental rift magmatism: A chemo-spatial analysis of rift magmas	B 27
Straub	Susanne		A global view on arc-trench connectivity and andesite petrogenesis	B 97
Sun	Tianhaozhe	D. Saffer, S. Ellis	Studying the coupling between deformation, pore pressure, and fluid flow in subduction forearcs	A 91
Svoboda	Christopher	T. Rooney, C. Deering, G. Girard	Evolution of transcrustal distillation columns: Evidence from andesites of the Taupo Volcanic Zone	B 28
Tian	Xiaochuan	W.R. Buck	Lithospheric thickness of volcanic rifting margins: Constraints from seaward dipping reflectors	B 29
Till	Christy	A. Kent, K. Cooper	A model for the first order controls on volcanic repose time	B 30
Tilley	Hannah	G.F. Moore, M. Yamashita, S. Kodaira	Along-strike variations in protothrust zone characteristics at the Nankai Trough subduction margin	A 92
Tobin	Harold	SZ4D RCN Steering Committee	The SZ4D Vision: Planning for an integrated subduction research program	A 93
van Dam	Loes	C. Kincaid	Material transport in the mantle through 4-D geodynamical models of mid-ocean ridges	B 31
van Wijk	Jolante	M. Berry	From source to sink: Tectonic-landscape evolution modeling of a continental rift	A 94
Wei	S. Shawn		Seismic constraints on subducted hydrous minerals in the Tonga slab	B 32



GeoPRISMS Synthesis & Integration Theoretical and Experimental Institute

Menger Hotel, San Antonio, TX

February 27 - March 1, 2019

- Poster list -

First author name		co-author(s)	poster title	Poster ID #
Willis	David	P. Betts, L. Moresi, L. Ailleres	Neogene stress rotation at the transition from subduction to continental collision, Marlborough, New Zealand	A 95
Wurth	Kimberly	S. DeBari	Clinopyroxene trace element chemistry as a proxy for magma compositional variations in the Izu Bonin rear arc over the last 14 million years	B 34
Yang	Xiaotao	H. Gao	Seismic imaging of slab segmentation and its correlation with volcano distribution along the Aleutian-Alaska subduction zone	B 35