Session Information

Oral Sessions
Sessions are being held in the Convention Center (CC) and Marriott Marquis (MM)

Poster Sessions
Posters are on display in the following venue throughout the week: Hall A-C (Poster Hall)

Session & Paper Numbering

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation. Example: A21A-01 = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

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The program is current as of 06 December 2018. An omitted abstract ID number in the presentation order indicates that the abstract has been withdrawn by the presenter from the session. Please refer to the online program at https://agu.confex.com/agu/fm18/meetingapp.cgi/Home for updates.

Monday A.M.

S11B (MM) Independence E
Monday 0800h

Earthquake Source Physics Inferred from Macroscopic Source Parameters and Seismicity Parameters I

Presiding: Takahiko Uchide, National Institute of Advanced Industrial Science and Technology (AIST); Marine Denolle, Harvard University; Hiroki Sone, University of Wisconsin;

0800h S11B-01 Earthquake Stress Drop and Peak Ground Motion: A Machine Learning Perspective: D T Trugman, P M Shearer
0815h S11B-02 Towards Improved Stress Drop Measurement: A Detailed Comparison of Contrasting Approaches: R E Abercrombie, P M Shearer
0830h S11B-03 Applying improved spectral analysis to an induced earthquake sequence in Oklahoma and implications on earthquake triggering: X Chen, R E Abercrombie

0845h S11B-04 Spectra of Large Earthquakes at short epicentral distances: S Ruiz, R I Madariaga, E Rivera, L Felipe Sr, J C Baez Sr

0900h S11B-05 Stress-Drop Estimates for Seismicity on Hawai’i Island from P-wave Spectral Analysis: B Zhang, P M Shearer, R S Matoza, P Okubo

0915h S11B-06 Estimating Regional Wave Source Time Functions Using a Multi-Channel Deconvolution Method: J Xie, A C Gallegos

0930h S11B-07 Fast moment acceleration in the development phase of an earthquake derived from a large catalog of Source Time Functions.: J Renou, M Vallée

0945h S11B-08 Earthquake Sub-event Scaling : New Perspective for Rupture Determinism: P J Danré, J Yin, B P Lipovsky, M Denolle

T11A (MM) Liberty N-P

Monday 0800h

Deep Structure and Geodynamics of the Continental Convergence Zones I (joint with Dl, G, S, V)

Presiding: Shuwen Dong, Chinese Academy of Geological Sciences; Larry Brown, Cornell Univ; Mian Liu, University of Missouri Columbia; Rui Gao, Institute of Geology, Chinese Academy of Geological Sciences;

0800h Introductory Remarks by Profs. Gao Rui and Larry Brown:

0805h T11A-01 New action of deep exploration in China: SinoProbe-II: S Dong, R Gao

0825h T11A-02 A Review of crustal shortening, mantle lithospheric thinning, and lateral growth of the Tibetan Plateau: M Liu, Y Li, Y Li, Y Sun, T Lei, Z H Li, X Shen

0840h T11A-03 The Crustal-scale Shortening on the Eastern Margin of the Tibet Plateau: the Main Mechanism of Uplift--Revealed from Deep Seismic Reflection Profiles Across the Min Shan and Hu Ya Faults: R Gao, X Xu, X Guo, W Li, H Li, H Wang, X Huang, Z Lu, Z Ye

0850h T11A-04 Seismological observations of the isostatic support of southwestern Tibet: H Matchette-Downes, K F Priestley, R D van der Hilst

0900h T11A-05 Lateral variation of the Main Himalayan Thrust in the source area of the 2015 Mw7.8 Gorkha, Nepal earthquake: L BAI, S L Klemperer, J Mori, M S Karplus, H Liu

0920h T11A-07 Understanding the Crust Deformation Mechanism in Central Tibetan Plateau: Insights from Magnetotelluric Array Data: H Dong, W Wei, S Jin, G Ye, J Jing, L Zhang, C Xie, Y Yin

0930h T11A-08 Seismic Bright spots in Qiangtang Terrane from deep reflection surveying: Z Lu, R Gao, W Li, H Li

0940h T11A-09 Continental subduction drives Himalayan orogen: Insights from geodynamic numerical modeling: R Qi, J Liao, R Gao

T11B (MM) Liberty M

Monday 0800h

Observations and Models of Multiphase Deformation in Rifts and Rifted Margins I

Presiding: John Naliboff, University of California Davis; Rebecca Bell, Imperial College London; Jolante van Wijk, New Mexico Institute of Mining and Technology; Scott Bennett, USGS;

0800h T11B-01 Towards universal controls on extensional processes from observations of temporal and spatial heterogeneity in ancient and active rifts: D J Shillington

0815h T11B-02 Spatial and Temporal Variations in Crustal Kinematics Across the Lake Tanganyika Rift, East Africa.: L J Wright, J D Muirhead, C A Scholz

0830h T11B-03 Comparing Active and Time-Averaged Deformation Patterns in Cratonic Rifts: A Western rift, Africa Case Study: C J Ebinger, A Lavayssiere, C Drooff, R J Gallacher, F Illsley-Kemp, S J C Oliva, D Keir, T Q H Pham

0845h T11B-04 Red Sea Multiphase Deformation: Implications of early rifting delocalization on the Arabian Margin present-day deformation field: T Aldaajani, K Furlong, R Malservisi, M W Herman

0900h T11B-05 Strain migration and transition during multiphase rifting: Observations from the Zhu 1 Depression, Pearl River Mouth Basin, South China Sea: S Hao, L Mei, P Deng, J Du, X Xu


0930h T11B-07 Crustal structure and rift architecture of the Georges Bank, U.S. Atlantic margin: U S Ten Brink, G Lang, D R Hutchinson, U Schattner

0945h T11B-08 Structural style and evolution of multiple-phase rifts: Examples from the northern North Sea Rift: R Gawthorpe, T B Phillips, H Fazli Khani, H Fossen, R E Bell, C A L Jackson, T Wrona, J S Claringbould, A Lenhart, J I Faleide
**T11C  (MM) Liberty L**

**Monday  0800h**

**Subduction Top to Bottom-2 I**

*Presiding: David Scholl, University of Alaska Fairbanks; Gray Bebout, Lehigh University; Laura Wallace, University of Texas at Austin; 0800h T11C-01 The Effects of Plate-Bending-Related Thickening of the Oceanic Crustal Aquifer on Subduction Zone Temperatures: A C Lucero, G A Spinelli, J He

0815h T11C-02 Consolidation behavior, permeability, and compressional wavespeeds of sediment entering the eastern Aleutian subduction zone: Implications for the evolution of subducted sediments: P Miller, D M Saffer, P Shokouhi

0830h T11C-03 Structural Evidence for Heterogeneous Plate Coupling on the Cascadia Margin: C Goldfinger, T Kane

0845h T11C-04 Properties of Shallow Subduction Megathrust Earthquakes: A Multi-Decade Review: S L Bilek, T Lay

0900h T11C-05 Learning From Observed Crustal Deformation Following Ten Mw 8.0-9.5 Subduction Earthquakes: T Sun, K Wang, J He

0915h T11C-06 Controls on megathrust earthquake recurrence inferred from friction modeling and seismic imaging: X Tong, R W Porritt, L L Lavier

0930h T11C-07 Along-Strike Variations in Seismic Velocity Structure and Implications for Geologic Controls on the Rupture Zone of the April 1, 2014 Pisagua, Chile Earthquake: K K Davenport, A M Trehu, F González Rojas, E E Vera, E Contreras Reyes

0945h T11C-08 Silica Kinetics and Subduction Zone Slip Behavior: D M Fisher, A Smye, J N Hooker, D O Oakley, A Yamaguchi

**T11D  (CC) Hall A-C (Poster Hall)**

**Monday  0800h**

**Deep Structures of the Eastern Tethyan Orogenic Belt and Related Geodynamics Processes II Posters**

*Presiding: Xiaofeng Liang, State Key Laboratory of Lithospheric Evolution, Institute of Geology and Geophysics, Chinese Academy of Sciences; Sofia-Katerina Kufner, Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences; Xiaohui Yuan, Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences; Shunping Pei, Institute of Tibetan Plateau Research, Chinese Academy of Sciences; 0800h T11D-0172 POSTER S-wave velocity images and deformation of the crust in the SE margin of Tibet revealed by receiver functions: H Yang, J Hu, H Peng

0800h T11D-0173 POSTER Crust and upper mantle structure beneath Namche Barwa from cooperative inversion of teleseismic, receiver function and magnetotelluric data: M Peng, H Tan, C Lin, T Tong, M Wang, L Xu

0800h T11D-0174 POSTER A Study on FCM Inversion Algorithm of 2D Magnetotelluric: M Wang, H Tan, M Peng, H Song

0800h T11D-0175 POSTER 3-D joint inversion of CSAMT and magnetic data based on cross-gradient theory: H Song, H Tan, M Peng, M Wang, P Wu

0800h T11D-0176 POSTER Crustal structure beneath Namche Barwa, eastern Himalayan syntaxis: Evidence from three-dimensional magnetotelluric inversion: H Tan, C Lin, M Peng, T Tong, M Wang, L Xu

0800h T11D-0177 POSTER Methodology of Cooperative Inversion of 1-D Magnetotelluric and Surface-Wave Dispersion Data and Application to Longmenshan Fault Zone: P Wu, H Tan, H Ma, M Peng, M Wang, H Song

0800h T11D-0178 POSTER Joint Inversion for the Lithospheric Structure in East Tibet: Y Deng, Z Yang, Q Zhong, J Li, Y Deng

0800h T11D-0180 POSTER Uppermost mantle velocity and anisotropy beneath Mongolia and its Adjacent Regions: J He, Y Li, E A Sandvol, Q Wu, G Du

0800h T11D-0181 POSTER Ambient noise tomography based on a dense coverage seismic array in NE Tibetan Plateau and its adjacent areas: J Pan, Q Wu, Y Li, Z Ding
0800h **T11D-0182 POSTER** Uplift and partial melt beneath eastern Himalayan syntaxis revealed by receiver function analysis from Namche Barwa seismic array: **T Tong**, M Peng, H Tan, C Lin, M Wang, L Xu

0800h **T11D-0183 POSTER** Convective removal of the Tibetan Plateau mantle lithosphere by ~26 Ma: **H Lu**

0800h **T11D-0184 POSTER** The crustal structure in the transition zone between the NE Tibet and the Ordos basin: **X Tian**

0800h **T11D-0185 POSTER** High-resolution uppermost mantle velocity structure beneath central Tibet and its implications for geodynamics: **S Nie**, X Tian, X Liang, Y Chen

0800h **T11D-0186 POSTER** Lithospheric Structure Beneath the NE Iranian Plateau Revealed by S-wave Receiver Function Migration: **Z Wu**, L Chen, M Talebian, X WANG, M Jiang, Y Ai, M M Khatib, Y He, X Liang, L Zhao

0800h **T11D-0187 POSTER** Crust and Upper Mantle Structure Beneath Qilianshan Fault Zone and Its Adjacent Regions: **P Zhao**, J Chen, Y Li, Q Liu

0800h **T11D-0188 POSTER** 3D anisotropic velocity structure of the eastern Tibetan Plateau based on a 4-D dispersion curve inversion method: **C Liang**, Z Liu

0800h **T11D-0189 POSTER** Dynamic processes and mechanisms for collision in Tibetan plateau from numerical modeling: **S Li**

0800h **T11D-0190 POSTER** Seismotectonics of the Tajik basin and north-eastern Afghanistan: **S K Kufner**, N Kakar, B Schurr, X Yuan, S Metzger, S Murodkulov

0800h **T11D-0191 POSTER** Radial anisotropy of the lithosphere beneath Tibet from finite frequency surface wave tomography: **Y Fang**, Z Yao

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**POSTERS**

**T11E** (CC) Hall A-C (Poster Hall)

**Monday 0800h**

**Mechanics of Seismic and Aseismic Events from Small-Scale Lab Experiments to Large Earthquakes III Posters** (joint with MR, S)

**Presiding:** Thomas Goebel, University of California Santa Cruz; Hiroki Sone, University of Wisconsin; Brett Carpenter, INGV National Institute of Geophysics and Volcanology; Philip Benson, University of Portsmouth;

0800h **T11E-0192 POSTER** Source Parameter Study for Confined Lab Earthquakes on a 3 m Biaxial Apparatus: **S Wu**, G Mclaskey

0800h **T11E-0193 POSTER** Experimental study on the effect of clay and organic matter content on shear slip characteristics of shale: **H Ge**, J Wang, X Wang, Y Shen, T Liu

0800h **T11E-0194 POSTER** Strengthening Effect of High Pore Pressure on the Frictional Behavior of Serpentine Gouge: **T Xing**, W Zhu, M E French, B Belzer

0800h **T11E-0197 POSTER** Analytical investigation of seismic wave propagation in underground mines for suitable placement of seismic sensors: **A Halder**, D Chakravarty

0800h **T11E-0198 POSTER** Evolution of Fault Zone Properties Inferred from Fault-Interface Rayleigh Wave Speed Measurement: **S Xu**, E Fukuyama, F Yamashita

0800h **T11E-0199 POSTER** Microseismicity associated with the olivine-wadsleyite phase transition in Mn$_2$GeO$_4$: **F Shi**, T Yu, T Officer, L Zhu, J Zhang, Z Li, Y Wang

0800h **T11E-0200 POSTER** Longer Migration and Spontaneous Decay of Aseismic Slip Pulse on the Earthquake Nucleation Process Induced by Fault Roughness: **S Ozawa**, T Hatano, N Kame

0800h **T11E-0201 POSTER** Weak Velocity Weakening of Augite with Concomitant Intergranular Pressure Solution under Hydrothermal Conditions: **P Tian**, C He

0800h **T11E-0202 POSTER** Frictional Behavior of Chlorite at In Situ Conditions Along Shallow Plate Boundary Faults: **B Belzer**, M E French

0800h **T11E-0203 POSTER** Energy-Flux During Earthquake Frictional Sliding: **Z Reches**, X Zu, B M Carpenter

0800h **T11E-0204 POSTER** Probing slow and fast slip events in the laboratory applying machine learning: **D C Bolton**, C Hulbert, B Rouet-Leduc, C Marone, R A Guyer, P A Johnson

0800h **T11E-0205 POSTER** Anatomy of dynamic slip in laboratory earthquakes at crustal conditions: **C Harbord**, S B Nielsen, N Paola, D Faulkner, F X Passelegue

0800h **T11E-0206 POSTER** Frictional properties of the Nankai frontal thrust and megasplay fault – Potential for shallow unstable slip: **A Rösn», M Ikari, D M Saffer, K Stanislowski, A Kopf

0800h **T11E-0207 POSTER** Crack propagation in anisotropic material: **A Bonnelye**, H Gharbi, S Hallais, H S Bhat, A Dimanov, M Bornert, M Mezni, N Conil

0800h **T11E-0208 POSTER** Using granular physics to model rate- and state-dependent frictional behavior of earthquake fault zones: **B Ferdowski**, A M Rubin
0800h  **T11E-0209 POSTER** Three-dimensional simulation of sheared granular fault gouge using the combined finite-discrete element method: K Gao, E Rougier, R A Guyer, P A Johnson

0800h  **T11E-0210 POSTER** Seismogenic Fracture at High Pressure and Temperature in a Nickel Silicate Olivine: T Officer, F Shi, T Yu, L Zhu, Z Li, Y Wang

0800h  **T11E-0211 POSTER** Slip Velocity Functions Recorded for Different Lithologies During Stick-slip Laboratory Experiments.: E Tinti, M M Scuderi, C Collettini

0800h  **T11E-0212 POSTER** Frictional and mechanical behavior of simulated, sedimentary fault gouges: A Ougier-Simonin, A Castagna, R J Walker, P M Benson

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**T11F (CC) Hall A-C (Poster Hall)**

**Monday 0800h**

**The Spatiotemporal Evolution of Structure and Fault Properties During the Seismic Cycle Posters**  (joint with MR, S)

*Presiding: John Bedford, University of Liverpool; Marieke Rempe, University of Liverpool; Christopher Harbord, University of Durham;*

0800h  **T11F-0213 POSTER** Dynamic Evolution Of Off-Fault Medium During An Earthquake: M Y Thomas, H S Bhat

0800h  **T11F-0214 POSTER** Petrophysical Changes in Fault Damage Zone Rock Induced by Single and Repeated Earthquakes: a Laboratory Study.: F M Aben, M L Doan, T M Mitchell

0800h  **T11F-0215 POSTER** Fluid-assisted healing of micro-cracks in fault damage zones: T M Iwalewa, A Yehya, J R Rice, Z Yang

0800h  **T11F-0216 POSTER** Reading spatial stress variations observed at multiple scales in boreholes from the Taiwan Chelungpu-fault Drilling Project: M Talukdar, H Sone, L W Kuo

0800h  **T11F-0217 POSTER** Extreme geothermal gradients at active plate boundaries: R Sutherland, J Townsend, V Toy

0800h  **T11F-0218 POSTER** Coupling long-term and short-term physics of an earthquake on complex fault: K Aslam, E G Daub, E Choi

0800h  **T11F-0220 POSTER** Probing changes in frictional state due to normal stress perturbations using controlled-source ultrasonics: S Shreedharan, J Riviere, C Marone

0800h  **T11F-0221 POSTER** Grain-Scale Deformation Mechanisms Reveal Slow-to-Fast Slip on an Actively Exhuming Low-Angle Normal Fault, Woodland Rift, SE Papua New Guinea: M Mizera, T A Little, C J Boulton, D J Prior


0800h  **T11F-0223 POSTER** A new module designed to study seismic attenuation in large displacement experimental faults: C Harbord, G Di Toro, E Spagnuolo, N Tisato

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**T11G (CC) Hall A-C (Poster Hall)**

**Monday 0800h**

**Transdisciplinary Views of Spatial and Temporal Fault-Zone Evolution Posters**  (joint with EP, MR, NH, S)

*Presiding: Robert McDermott, Utah State University; Randolph Williams, McGill University; Gabriele Calzolari, Utah State University;*

0800h  **T11G-0224 POSTER** Sedimentary signals of recent faulting along an old strand of the San Andreas Fault, USA: J C Fosdick, K Blisniuk

0800h  **T11G-0225 POSTER** How subduction megathrust structural variability impacts earthquakes: J D Kirkpatrick, J Edwards, A Verdechcia, J Kluesner, R M Harrington, E A Silver

0800h  **T11G-0226 POSTER** A new metric for alpha ejection corrections in complex Fe-oxide aggregates: Utility for (U-Th)/He dating of fluid-rock interactions in fault-zones: W Guenthner, C Huber, H Karani

0800h  **T11G-0227 POSTER** Localization of seismic and aseismic strain in hematite vein-fault mirror pairs: R McDermott, A K Ault, K F Wetzel

0800h  **T11G-0228 POSTER** Thermomechanical evolution of experimentally-derived hematite slip surfaces: G Calzolari, A K Ault, G Hirih

0800h  **T11G-0229 POSTER** Precipitation-Strengthening and Fault Zone Evolution, Dixie Comstock Epithermal Deposit, Dixie Valley, Nevada, USA: O A Callahan, P Eichhulb, N C Davatzes

0800h  **T11G-0230 POSTER** Paleomagnetic analyses of pseudotachylyte veins constrain fault mechanics: M Longchamp, J M Feinberg, J R Hoehn, L B Goodwin, B R Jicha, B S Singer, D M Smith

0800h T11G-0232 POSTER Single-Aliquot Hematite (U-Th)/He Dating: Preventing U Loss During Laser Heating by Increased O\textsubscript{2} Partial Pressure: F Hofmann, K A Farley, J Treffkorn

0800h T11G-0233 POSTER An alternative interpretation of the late –to–mid Quaternary tectonic evolution of the southern San Andreas Fault along its restraining bend: K Blisniuk, G Balco, J C Fosdick, J Stone

0800h T11G-0234 POSTER Pseudotachylyte records earthquakes >M6.0 on low-angle normal faults: J R Hoehn, L B Goodwin, M Longchamp, J M Feinberg, B R Jicha, B S Singer, D M Smith, M T Heizler

0800h T11G-0235 POSTER Co-seismic boiling cannot seal faults: R T Williams

T11H (CC) Hall A-C (Poster Hall)

Monday 0800h

Subduction Zone Processes, Orogenesis, and Seismic Hazard: From the Alpine Mediterranean to the Indo-Burma Region II Posters (joint with G, NH, S, V)

Presiding: Patricia Persaud, Louisiana State University; Francesca Di Luccio, National Institute of Geophysics and Volcanology; Claudia Piromallo, National Institute of Geophysics and Volcanology; Michael Steckler, Lamont-Doherty Earth Obs;

0800h T11H-0236 POSTER Geomorphic Expression of Active Tectonics across the Indo-Burman Range.: P Maneerat, R Burgmann

0800h T11H-0237 POSTER A reappraisal on the present-day stress field of the Indo-Burman ranges: seismo-tectonic insights from faulting mechanisms: S C, A Earnest, S K


0800h T11H-0240 POSTER Breakup of the Indian Craton and Clockwise Rotation of the Shillong Plateau: R Mallick, E O Lindsey, J Hubbard, E Hill

0800h T11H-0241 POSTER Rupture of the Indian slab in the 2011 Mw 6.9 SikkimHimalaya earthquake and its tectonic implications: A Earnest, S T C, S K, R Anil

0800h T11H-0242 POSTER Is there a big mantle wedge under eastern Tibet?: J Lei Sr, D Zhao, X Xu


0800h T11H-0244 POSTER Imaging Slab Detachment within the Western Hellenic Subduction Zone: S E Hansen, C Evangelidis, G A Papadopoulos

0800h T11H-0245 POSTER A detailed crust to upper mantle structure: Comparison between Algerian and Alboran domains in the Western Mediterranean: A Kumar, M Fernandez, J Vergés, M Torne, J Jiménez-Munt

0800h T11H-0246 POSTER Tectonic and seismic activity of deep structures imaged by wide-angle seismic forward modeling in the Ionian basin (Central Mediterranean Sea): F Klingelhofer, D Delong, H Kopp, M A Gutscher, S Murphy, D Grandorge, L Margheriti, M Moretti, A Polonia

0800h T11H-0247 POSTER New Technology and Methods for Characterizing the Seismic Hazard and Active Hydrothermal System beneath Lipari Island, Italy: P Persaud, J O Kain, L Cucci, F Di Luccio, A Esposito, G Ventura

0800h T11H-0248 POSTER Seismic rupture kinematics along the crust-mantle boundary of a subducted slab: insights from ultramafic pseudotachylytes in Corsica: E Hosseinzadehsabeti, E C Ferre, J W Geissman, S A Friedman, T B Andersen, E Spagnuolo, G Di Toro

V11B (MM) Marquis 6

Monday 0800h

Crustal Formation, Fluid–Rock Reactions, and Subsurface Microbial Communities in the Samail Ophiolite: Results from the Oman Drilling Project and Related Research II (joint with B, T)

Presiding: Damon Teagle, University of Southampton; Juerg Matter, University of Southampton; Peter Kelemen, Lamont Doherty Earth Observatory, Columbia University; Alexis Templeton, University of Colorado at Boulder;


0830h **V11B-03** Physical property of the fossilized crust-mantle transition zone from ICDP Oman Drilling Project Hole CM1A and CM2B: **K Okazaki**, N Abe, K Hatakeyama, Y Akamatsu, E Takazawa, D A H Teagle, P B Kelemen, J A Coggon

0845h **V11B-04** Experimental constraints on the hydrous nature of the magmatic processes at the Sumail ophiolite paleoridge (Sultanate Oman): **J Koepke**, S T Feig, L France

0900h **V11B-05** Rapid Cooling of the Crust and Mantle at Hess Deep is Consistent with the Sheeted Sill Model for Accretion of Oceanic Crust: **N L Grambling**, N J Dygert, M M Jean

0915h **V11B-06** Questioning the Penrose Paradigm: Insights from *in-situ* gabbroic lower ocean crust at Pito Deep: **M Gess**, B E John, M J Cheadle, T C Brown, S Swapp, J S Gee

0930h **V11B-07** Origin of Serpentine and Listvenite Near the Basal Thrust of the Samail Ophiolite Recorded in Oman Drilling Project Hole BT1B: **C E Manning**, S Lu, P B Kelemen

0945h **V11B-08** Strontium isotope profile of Oman Drilling Project hole BT1B: **J C de Obeso**, Y Cai, P B Kelemen

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**T12A** (MM) Liberty N-P

**Monday 1020h**

**Deep Structure and Geodynamics of the Continental Convergence Zones II**

*Presiding: Shiwen Dong*, Chinese Academy of Geological Sciences; *Larry Brown*, Cornell Univ; *Mian Liu*, University of Missouri Columbia; *Rui Gao*, Institute of Geology, Chinese Academy of Geological Sciences;

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1030h **T12A-02** The Mesozoic mineral systems of South China: lithospheric structure and deep processes constrained from integrated geophysical data--preliminary results: **Q Lyu**, D Shi, J Yan, Z Liu

1050h **T12A-04** 3D shear velocity structure of the Arabia-Eurasia collision zone from transdimensional trees inversion of seismic noise: **S Pilia**, R Hawkins, M Ali, A Kaviani
1100h T12A-05 Tectonic Evolution Cycle and Structural Model of Longmen Shan Mountains Intra-continental Orogenic Belt, Southwest China: D He


1120h T12A-07 The dynamics of continental lithospheric extension from broadband seismic array in southeast China: Q Li

1130h T12A-08 Consequences of the Cretaceous west-dipping subduction in western North America: W Zhang, S T Johnston, C A Currie

1140h T12A-09 Double-Difference Earthquake Relocation and Tomography of the Eastern Greater Caucasus: M Gunnels, E A Sandvol, G Yetirmisli, K Sabina

1150h T12A-10 Crustal and upper-most mantle seismic structure beneath the Middle-east using surface-wave tomography: A Kaviani, A Paul, Y LU, L Bosch, A Moradi, E A Sandvol, S Pilia, Z Tang, P M Mai, G Rumpker


1210h T12A-12 Paleozoic Subduction zone beneath the Hexi Corridor, NW China Revealed by the Deep Seismic Reflection profile: X Xiong, R Gao, Y Li, X Huang

T12B (MM) Liberty M

Monday 1020h

Observations and Models of Multiphase Deformation in Rifts and Rifted Margins II

Presiding: John Naliboff, University of California Davis; Rebecca Bell, Imperial College London; Jolante van Wijk, New Mexico Institute of Mining and Technology; Scott Bennett, USGS;

1020h T12B-01 What Tectonic Record Does the Passage of a Weak Plume Leave in a Rift?: J van Wijk, G J Axen

1035h T12B-02 Mesozoic rifting style of NW Africa rifted margin and West Iberia rifted margin and Galicia Interior Basin: C R Ranero, V Sallaes, A Calahorrano, A L Cameselle, I Merino, M Neres, D Dagnino, A Melendez, C E Jimenez Téjero, R Bartolome

1050h T12B-03 The Thermomechanical Evolution of Extended Lithosphere: Inheritance, Depth-Dependent Thinning and Detachment Faults.: L L Lavier, A Smye, P J Ball

1105h T12B-04 Effect of contrasting strength from inherited crustal fabric on the development of rifting margins: the example of the Northeastern Canadian margin: S Jammes, L L Lavier

1120h T12B-05 Variability in Normal Fault Activity in the Central Italian Apennines: Insights from Thermomechanical Modelling: A Geurts, R S Huismans, P A Cowie

1135h T12B-06 Continental Ice Sheets and Continental Break-up: J J Armitage, K D Petersen, D Ferguson, T T Creyts

1150h T12B-07 Tectonic and climatic controls on endorheic-exorheic transitions in narrow continental rifts: M A Berry, J van Wijk, D Cadol, E Emry, D Garcia-Castellanos

1205h T12B-08 The importance of topographic steady-state for the stability of half-graben structures: J A L Olive, L C Malatesta, M D Behn, W R Buck

T12C (MM) Liberty L

Monday 1020h

Subduction Top to Bottom-2 II

Presiding: David Scholl, University of Alaska Fairbanks; Gray Bebout, Lehigh University; Laura Wallace, University of Texas at Austin;

1020h T12C-01 Bridging Long- and Short-term Behavior Shows Fault Strength as a Strain-average Quantity: Y van Dinther

1035h T12C-02 Deformational, Thermal, and Petrologic Evolution of the Forearc Mantle Wedge Corner in Subduction Zones: I Wada, L Kenyon

1050h T12C-03 Continental Collisions Zones and Serpentinite Belts: Water Release and Increased Serpentinite Mobility with Cold Forearc Mantle Isolation from Active Slab Cooling and Dewatering: S H Kirby

1105h T12C-04 Exhumed Mafic HP Rocks are Warmer than Forearc Oceanic Crust in Modern Subduction Zones Suggesting Preferential Exhumation from Warm Subduction Settings: P E Van Keken, I Wada, G A Abers, B R Hacker, K Wang

1120h T12C-05 Petrochronologic constraints on the thermal evolution of the Catalina Schist: K M Harvey, P G Starr, S Walker, S Penniston-Dorland, M J Kohn, E Baxter

1135h T12C-06 Concurrent subduction and exhumation of high-pressure rocks: a case study from the Western Alps: A Smye, S Seman, M Scambelluri
1150h **T12C-07** Closing the gap in a double seismic zone: Properties and origin of intraslab seismicity in Northern Chile: *C Sippl, B Schurr, T John, S Hainzl*

**T12C-08** Global characterization of seismicity along Double Benioff Zones: *M A Florez, G A Prieto*

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**V12B (MM) Marquis 6**

**Monday 1020h**

**Crustal Formation, Fluid–Rock Reactions, and Subsurface Microbial Communities in the Samail Ophiolite: Results from the Oman Drilling Project and Related Research** *(joint with B, T)*

*Presiding:* Damon Teagle, University of Southampton; Juerg Matter, University of Southampton; Peter Kelemen, Lamont Doherty Earth Observatory, Columbia University; Alexis Templeton, University of Colorado at Boulder;

**1020h V12B-01** Quantification of the downhole degree of serpentinization estimated by X-ray CT core imaging (Oman Drilling Project Phase 2, D/V CHIKYU): *K Michibayashi, I Katayama, P B Kelemen, K Okazaki, M Godard, E Takazawa, D A H Teagle*


**1050h V12B-03** Correlated variation in vein type, vein frequency, pH, oxygen fugacity and depth in Oman Drilling Project Holes BA1B, BA3A and BA4A: *P B Kelemen, W Bach, K A Evans, A Esfami, A Farough, M Hamada, Y Ichiyama, W A Kahl, J M Matter, P A Pezard, A N Paukert Vankeuren, M Godard, K Michibayashi, S Choe, J A Coggon*

**1105h V12B-04** Permeability profile across the crust-mantle sections in the Oman Drilling Project inferred from onboard measurements of dry and wet resistivity: *I Katayama, K Okazaki, N Abe, O I Ulven, G Hong, W Zhu, B Cordonnier, K Hatakeyama, Y Akamatsu, K Michibayashi, M Godard, P B Kelemen*

**1120h V12B-05** Brucite as an Important Sink and Source of Fe(II) During Low-Temperature Serpentinization: *E T Ellison, A S Templeton, L E Mayhew, S K D Zeigler*


**1150h V12B-07** An Active Deep Subsurface Microbiome Supported by C1 Products of Serpentinization in the Samail Ophiolite: *E Fones, D R Colman, E A Kraus, D B Nothaft, S Poudel, K R Rempfert, J R Spear, E S Boyd, A S Templeton, E S Boyd*

**1205h V12B-08** Subsurface Cycling of Nitrogen in the Actively Serpentinizing Samail Ophiolite, Oman: *K R Rempfert, S Poudel, E A Kraus, J R Spear, E S Boyd, J M Matter, S Kopf, A S Templeton*
Monday P.M.

S13A  (MM) Independence E

Monday  1340h

Earthquake Source Physics Inferred from Macroscopic Source Parameters and Seismicity Parameters II

Presiding: Takahiko Uchide, National Institute of Advanced Industrial Science and Technology (AIST); Marine Denolle, Harvard University; Hiroki Sone, University of Wisconsin;

1340h  S13A-01  Relative moment tensors: tensile slip inversion including S waves: A P Plourde, M G Bostock

1355h  S13A-02  A parsimonious Bayesian cut-and-paste algorithm for centroid moment tensor inversion: J Dettmer, H Vasyura-Bathke

1410h  S13A-03  Mechanical and Seismic Characteristics of Confined Dynamic Ruptures Generated on a 3-m Machine: G Mclaskey, S Wu

1425h  S13A-04  Energy budget of earthquakes: Connecting remote observations with local physical behavior: V Lambert, S M Perry, N Lapusta


1455h  S13A-06  Gravity Change and its Correlation with Seismic B-value in Sumatran Region: Seismotectonic Implications: Z Gui, Y Bai, Z Wang, T Li


1525h  S13A-08  Physical mechanism of oceanic mantle earthquakes: Comparison of b-values of natural and lab earthquakes.: S Kita, T P Ferrand

T13B  (MM) Liberty M

Monday  1340h

Mechanics of Seismic and Aseismic Events from Small-Scale Lab Experiments to Large Earthquakes I (joint with MR, S)

Presiding: Thomas Goebel, University of California Santa Cruz; Hiroki Sone, University of Wisconsin; Brett Carpenter, INGV National Institute of Geophysics and Volcanology; Philip Benson, University of Portsmouth;

1340h  T13B-01  Comparison of the performances of visco-plastic and Cosserat THM numerical models for describing faults behavior: H Rattez, I Stefanou, J Sulem, M Veveakis, T Poulet

T13B  (MM) Liberty N-P

Monday  1340h

East Asia Tectonic and Geodynamic History Since the Mesozoic I (joint with DI, S, V)

Presiding: Jonny Wu, University of Houston; Kenichiro Tani, National Museum of Nature and Science; Lorenzo Colli, University of Houston; Jinwei Gao, Institute of Deep-sea Science and Engineering, Chinese Academy of Sciences;
1355h T13B-02 Fault reactivation in thick fault zones: a laboratory perspective: C Giorgetti, T Tesei, M M Scuderi, C Collettini
1410h T13B-03 Deformation textures in the principal slip zone of the Chelungpu fault, Taiwan, and its implication for stress change during the seismic cycle: L W Kuo, V Luzin, P C Chen, E C Yeh, K F Ma
1440h T13B-05 A rough business: Understanding earthquakes in the lab: P A Selvadurai, T Tormann, B Edwards, S Wiemer, S D Glasser
1455h T13B-06 Rupture Termination in Laboratory-Generated Earthquakes: C Y Ke, G Mclaskey, D S Kammer
1510h T13B-07 Rupture nucleation and propagation along circular experimental faults: X Chen, X Zu, Z Reches
1525h T13B-08 Rupture Energetics and Changing Elastic Properties in Crustal Rock from Laboratory-scale seismic tomography: F M Aben, N Brantut, T J Mitchell, E David

T13C (MM) Liberty L

Monday  1340h

Subduction Top to Bottom-2 III

Presiding: David Scholl, University of Alaska Fairbanks; Gray Bebout, Lehigh University; Laura Wallace, University of Texas at Austin;

1340h T13C-01 Effect of Thermally-controlled Permeability Barriers on the Location of Arc Volcanism at Subduction Zones: G Ha, L Montesi, W Zhu
1355h T13C-02 Arc-like Magmas Generated by Mélange-peridotite Interaction in the Mantle-wedge: V Le Roux, E Codillo, H Marschall
1410h T13C-03 Variable Fluid Contributions to Boninite Magma Generation, Mata Volcanic Field, NE Lau Basin as Determined by Trace Elements and Fe-Sr-Pb-Nd-Hf-U-Th-Ra Isotopes: V Finlayson, K H Rubin, J G Konter, N X Nie, N Dauphas
1440h T13C-05 Imaging the subduction of slow spread oceanic lithosphere in the Lesser Antilles subduction zone from P- and S-wave seismic attenuation tomography: S P Hicks, C Rychert, N Harmon, A Rietbrock, L Bie, S S Wei
1455h T13C-06 Using Receiver Functions and Petrologic Analysis to Investigate Flat Slab Subduction in Central Chile: J Domino, J R Bourke, E Chaves, A Nikulin, H R Naslund
1510h T13C-07 Seismically Anisotropic Magma Reservoirs Underlying Silicic Calderas, Implications for the Evolution of Magmatic Bodies: C Jiang, B Schmandt, J Farrell, F C Lin, K M Ward
1525h T13C-08 3D Autocorrelation Reflectivity Imaging of the Magmatic Plumbing System of Mount St Helens: A Levander, E Kiser, B Schmandt, S M Hansen, C W Ulberg, K Creager, J R Delph, K Crosbie, G A Abes

T13D (CC) Hall A-C (Poster Hall)

Monday  1340h

Whose Fault Is It? Relating Structural and Compositional Heterogeneity to Slip Behavior

I Posters

Presiding: Hannah Rabinowitz, Brown University; Helen Janiszewski, Carnegie Institution for Science; Ake Fagereng, Cardiff University; Samer Naif, Lamont-Doherty Earth Observatory;

1340h T13D-0250 POSTER Nanotextural and nanochemical constraints on the role of heat in development of crystalline-hosted, silica-rich fault mirrors in the Wasatch fault damage zone, Utah, USA: L M Houser, A K Ault, F A Shen
1340h T13D-0251 POSTER Stressed Out at the Border: Geological Observations and Models of Elevated Stresses along the Boundaries of Strong Lithologies in Shallow and Deep Mélanges: N J Phillips, C D Rowe, K Ujiie, E Young
1340h T13D-0252 POSTER Deformation of serpentinitised mantle of the Southern Troodos Transform Fault Zone, Cyprus: Implications for slip behaviour of oceanic transform faults: S Cox, A Fagereng, C J MacLeod
1340h T13D-0254 POSTER Serpentinite slickenfibres: analogues for small repeating earthquakes at the slab-mantle interface?: S A F Smith, S J Allan, M Tarling, M Palmer, M Negrini
POSTER Advances in submicron Raman spectroscopy mapping of serpentinite fault rocks: M Tarling, J S Rooney, S A F Smith, M Demurtas, M Negrini, C Viti, K C Gordon

POSTER Empirical observations and mechanical implications of fault displacement vectors within a complex fault system in the Taranaki Basin, New Zealand: A N Hughes, D Favorito

POSTER Impacts of Fault Geometry on Earthquake Slip Model: Y Zhang, Y Xu

POSTER Uncovering the physical controls of episodic tremor and slip events using machine learning: M E McLellan, P Audet


POSTER Subsurface Framework and Results for the U.S. Geological Survey Assessment of Potential Carbon Dioxide Storage Resources of the U.S. Atlantic Coastal Plain and Eastern Mesozoic Rift Basins: M L Buursink, W Craddock, M D Merrill, T Roberts-Ashby, S T Brennan, R Drake II, P Warwick, M S Blondes, P A Freeman, S M Cahan, C A DeVera, C D Lohr

T13E (CC) Hall A-C (Poster Hall)

Monday 1340h

Geology and Geophysics of the National Capital Region Posters (joint with H, NS, S)

Presiding: Marc Buursink, Potomac Geophysical Society; Catherine Enomoto, Potomac Geophysical Society;

POSTER Seismic Observations in the Washington, D.C. Area With a Raspberry Shake Network: J J Pulli

POSTER Seismic Hazard Maps With The Effect Of Local Geology For Washington, DC: C H Cramer, R Bhattacharai


POSTER Insights from Aftershocks of the 30 November 2017 Dover, DE, Earthquake: K M Pearson, W Y Kim, T L Pratt, V Lekic

POSTER Geochemistry of the Elk Hill Volcanic Complex and Pegmatite Belt, and their tectonic significance within the central Appalachian Piedmont, Virginia.: C I Roig, K S Hughes

POSTER Intrabasin faults accommodate significant cumulative and recent extension in the early stage Malawi Rift, East Africa: D J Shillington, C A Scholz, N J Accardo, P R N Chindandali, E A Onyango, J D Muirhead, J B Gahery, C Ebingher, A Nbyolle, T Q H Pham, S J C Oliva, G Kamihanga, R Ferdinand

POSTER Oblique rifting under low effective stresses or orthogonal rifting from stress rotations: how do faults reactivates in southern Malawi?: J N Williams, A Fagereng, L Wedmore, J Biggs, H S Mdala, F Mphepo, Z Dulanya


POSTER Kinematic Modelling at Margin Scale and its Link with Basin Thermicity : the Case of the Mozambique Rifted Margin.: N Etcheve, T Cornu, L Jeanniot, J P Calot

POSTER Kinematics and Geometry of Active Faults in the Magma-Poor Malawi rift, East Africa: C Ebinger, T Q H Pham, S J C Oliva, K E Peterson, P R N Chindandali, D J Shillington

1340h **T13F-0274 POSTER** Along-strike Refraction Tomography Results from the ENAM Community Seismic Experiment within the East Coast Magnetic Anomaly: **C Brandl**, L L Worthington, M B Magnani, B Shuck, D J Shilllington


1340h **T13F-0276 POSTER** Potential for CO2 Sequestration in Rift Basins Offshore the US East Coast: Updated basin extent and composition from prestack seismic inversion: **W Fortin**, D Goldberg, A L Slagle


1340h **T13F-0278 POSTER** Imaging Crustal Structure Beneath the Southeastern United States Using Receiver Functions: **Q Yang**, S S Gao, T Wang, K H Liu

1340h **T13F-0279 POSTER** Tracing Quaternary Faults within the Mesilla Boslon, Western Texas and Southern New Mexico: **D I Doser**, J P Cervantes, M Hiebing, V Avila, L Ma

1340h **T13F-0280 POSTER** A Tale of Two Rift Basins: Geophysical and Groundwater Studies of the Hueco and Mesilla Boslons, Western Texas, Southern New Mexico and Northern Chihuahua: **D I Doser**, J P Cervantes, M Hiebing, L Ma, P Budhathoki, M Lucero

1340h **T13F-0281 POSTER** Implications for the Grenville Orogeny and assembly of Rodinia from gravity anomalies along the Midcontinent Rift and Grenville Front: **R P Elling**, S Stein, C A Stein, G R Keller, M Barklage

1340h **T13F-0282 POSTER** Opening of the Midcontinent Rift during the assembly of Rodinia: **C A Stein**, S Stein, G R Keller, R P Elling

1340h **T13F-0283 POSTER** Crustal Structure and Evolution beneath the Mid-Continent Rift Constrained by Receiver Function and Gravity Analyses: **Y Yang**, L Liu, K H Liu, S S Gao

1340h **T13F-0284 POSTER** Transition from subduction to hyper-extension: the example of the Liwan sag (North South China Sea): **C Zhang**, M Su, G Manatschal, X Pang

1340h **T13F-0285 POSTER** Coulomb Stress Changes of the Devastating 26 July 1969 Yangjiang Earthquake, South China Coastal Region: **J Zhu**, S Li

1340h **T13F-0286 POSTER** The Cenozoic Multi-Phase Tectonic evolution of the Rift stage in the Linnan Sag, Bohai Bay Basin, East China: **D Wang**, Z Wu, W Li

1340h **T13F-0287 POSTER** Crustal Structure Of The South China Sea Rifted Margins: The Formation Of A Wide Rift Sytem: **C Ranero**, A L Cameselle, D Franke, U Barckhausen

1340h **T13F-0288 POSTER** Magmatic Diapirs within the Deep-water Area of Pearl River Mouth Basin (PRMB) : Insights into the Continental Breakup in the South China Sea (SCS) : **G Li**, L Mei, J Zheng, Z Zhou


1340h **T13F-0291 POSTER** Architecture and segmentation along the Northern Bay of Biscay passive margin (offshore France): **J Tugend**, M Emmanuel, S D Leroy, L Jolivet

1340h **T13F-0292 POSTER** Rift history, syn-rift sedimentation and paleoenvironment of the Corinith Rift basin: IODP Expedition 381 preliminary results: **L C McNeill**, D J Shilllington, C Gareth

1340h **T13F-0293 POSTER** Comparison of central Atlantic rifted margin structures from analysis of conjugate wide-angle seismic profiles offshore Nova Scotia and Morocco: **H Jian**, K W H Lau, M R Nedimovic, F Klingelhoefer, J P Canales

1340h **T13F-0294 POSTER** Quantitative analysis of distributed normal faulting patterns in 3D thermal-mechanical simulations of continental rifting: **J Naliboff**, S Brune, T Hake

1340h **T13F-0295 POSTER** Anomalously high mantle temperature beneath the Adare Basin, West Antarctica: Implications for synchronous rifting in the continent-ocean boundary: **Y G Kim**, B D So, J K Hong

1340h **T13F-0297 POSTER** Multiphase rifting of continental lithosphere under steady extension rate: **M Korchinski**, C Teyssier, D Whitney, P F Rey, L S Mondy
T13F-0298 POSTER Extension history, fault evolution, and structural inheritance along the multiphase Beaufort rifted margin, Northern Alaska: T J Tatarin, S A Kattenhorn

T13F-0299 POSTER Crustal architecture and tectonic evolution of a major pull-apart basin in East Antarctica: F Ferraccioli, E Armadillo, L Crispini, A Läufer, A S Ruppel, G Capponi, F Lisker

T13F-0300 POSTER Space-time variations in structural and magmatic styles of rifting in the Victoria Land Basin, West Antarctica: D L Harry, S Jha, C P Wenman

T13F-0301 POSTER Estimating flexural rigidity and load magnitude required for formation of Ross Island flexural moat: S Jha, D L Harry, C P Wenman

T13G (CC) Hall A-C (Poster Hall)

Monday 1340h

Integrating Stress Geomechanics: Observations, Models, and Implications

Presenting: Chung-Han Chan, Nanyang Technological University; Liqing Jiao, Earth Observatory of Singapore; Hung-Yu Wu, Institute for Research on Earth Evolution, Japan Agency for Marine-Earth Science and Technology;

T13G-0302 POSTER The Mechanical Role Of Side-Burden In Shaping Active Salt Diapirs: Insights From Geomechanical Forward Models In A Layered Evaporite Sequence (LES): R Goteti, S M Agar

T13G-0303 POSTER Obtaining Half Space Eshelby solution via Numerical Traction Cancellation: C Meng

T13G-0304 POSTER Applications of DCDA method for in-situ crustal stress measurement using recovered core samples: K Omura

T13G-0305 POSTER Seamount induced stress state in accretionary prism from real-scale numerical sandbox experiments: M Furuchi, D Nishituara, A Bauville, T Hori

T13G-0306 POSTER Time-dependent Seismic Hazard Assessment for Yangon, Myanmar: Impact of Stress Perturbation by Recent Earthquakes: C H Chan, H Aung, M Thant

T13G-0307 POSTER Controls on forearc deformation and stress switching after the great 2011 Tohoku-Oki earthquake from discrete numerical simulations: X Wang, J Morgan

T13G-0308 POSTER Rethinking Probabilistic Seismic Hazard in Taiwan after the 2018 Hualien, Taiwan, Earthquake Sequence: Importance of stress perturbation for the assessment: C H Chan, Y Lee, K F Ma, Y J Wang

T13G-0310 POSTER Implications of Borhole-Derived Stress Constraints for Fault Slip and Stress Heterogeneity beneath the Santa Barbara Channel, Offshore Southern California: P Persaud, E H Pritchard, J M Stock


T13G-0312 POSTER Discrete element modeling of a subduction zone with a seafloor irregularity and its impact on the seismic cycle: L Jiao, C H Chan, P Tapponnier, A Hubert-Ferrari

T13G-0313 POSTER Estimation of heterogeneity of stress field by using misfit angles in focal mechanisms: Y Yukutake, Y Ito

T13G-0314 POSTER Stress magnitude and orientation modeling with logging data in a deep coal-bearing formation near offshore Shimokita peninsular, North-East Japan: H Y Wu, C H Chan, W Lin, Y Sanada

T13G-0315 POSTER CoulombAnalysis: Program for Flexibly Calculating Coulomb Stress Changes on Receiver Faults with Any Orientations and Non-vertical Profiles with Any Trends: J Wang, C Xu, J Freymueller, Y Wen, Z Xiao

T13H (CC) Hall A-C (Poster Hall)

Monday 1340h

Synthesis: Knowns and Unknowns of the Cascadia Subduction Zone II Posters (joint with G, V) (joint with G, NH, S, V)

Presenting: Helen Janiszewski, Carnegie Institution for Science; Wenyoung Fan, Woods Hole Oceanographic Institution; Ikuko Wada, University of Minnesota Twin Cities; Caroline Seyler, McGill University;


T13H-0317 POSTER Northward Migration of the Oregon Fore-arc Block on the Gales Creek Fault: R E Wells, R J Blakely, J Redwine, S P Bemis
1340h **T13H-0319 POSTER** Eocene to Recent permanent forearc deformation in Northern Cascadia, southern Vancouver Island, British Columbia, Canada: N Harrichhausen, K D Morell, C Regalla, S E K Bennett, L J Leonard, E M Lynch

1340h **T13H-0320 POSTER** Upper plate deformation in northern Cascadia and active bending of the Olympic orocline: K D Morell, T Finley, C Regalla, L J Leonard

1340h **T13H-0321 POSTER** Crustal Deformation in Southernmost Cascadia: Insights from GPS-inferred Strain Rate Maps: C Nuyen, D A Schmidt

1340h **T13H-0322 POSTER** Inferred Slip Rates of Offshore Crustal Strike-Slip Faults in the Cascadia Accretionary Prism from Tectonic Block Models: D A Schmidt

1340h **T13H-0323 POSTER** The effects of episodic tremor and slip in the Cascadia subduction zone on upper plate deformation and stress accumulation during the earthquake cycle: K A McKenzie, K Furlong

1340h **T13H-0324 POSTER** : Upper Plate Deformation Across Active Faults in the Southern Cascadia Subduction Zone, Northern California: Geodetic Slip Rate Estimates Compared with Geologic Rates: J R Patton, T H Leroy, T B Williams, M A Hemphill-Haley, R C McPherson

1340h **T13H-0325 POSTER** Seismic Investigation of the Cascadia forearc in Central Oregon through the deployment of nodal seismometers: A Dunham, E Kiser

1340h **T13H-0326 POSTER** Controls on Seismicity in Cascadia: M G Bostock, N Christensen, S M Peacock

1340h **T13H-0327 POSTER** Earthquake Stress Drop Estimates for Shallow Earthquakes Along the Central Oregon Segment of the Cascadia Subduction Zone: S L Bilek, E Morton

1340h **T13H-0328 POSTER** Newly Detected, Small Earthquakes to Delineate Fault Heterogeneities in the Cascadia Seismogenic Zone: E Morton, S L Bilek, C A Rowe

1340h **T13H-0329 POSTER** Using Cascadia Initiative Data to Investigate Seismicity and Possible Shallow Slow Slip Along the Southernmost Section of the Cascadia Subduction Zone: T Alongi, S Y Schwartz, H R Shaddock, D Small, I Xia, F Huang, K Bahl

1340h **T13H-0330 POSTER** Searching for New Types of Slow Slip Events in the Cascadia Subduction Zone: W Fan, J J McGuire, J A Collins, E Davis, K Becker, M Heesemann

1340h **T13H-0331 POSTER** New Estimates of Earthquake Probability during Episodic Tremor and Slip in Cascadia: N Benz, N M Bartlow

1340h **T13H-0332 POSTER** Quality analysis of high frequency air-gun shot seismic recording in the Juan de Fuca plate: S Rathnayaka, H Gao

1340h **T13H-0333 POSTER** Pn tomography of the Juan de Fuca and Gorda Plates: Constraints on Mantle Deformation and Hydration In Young Oceanic Lithosphere: B P VanderBeek, D R Toomey

1340h **T13H-0334 POSTER** Imaging the subducted Gorda plate: Implications for the stress state and brittle-ductile transition of the Cascadia subduction zone: H Guo, J J McGuire, H Zhang

1340h **T13H-0335 POSTER** Preliminary results of crustal structure beneath the Juan de Fuca Plate: Constraints from OBS receiver function analysis: H Du, T Yang

1340h **T13H-0336 POSTER** Mantle Dynamics beneath Mount St. Helens from Shear Wave Splitting: C M Eakin, E Wirth, A Wallace, C W Ulberg, K C Creager, G A Aber

1340h **T13H-0337 POSTER** Does Subslab Buoyancy Govern Segmentation of Cascadia’s Forearc Topography?: M Bodmer, D R Toomey, J J Roering, L Karlstrom

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**T13I** (CC) Hall A-C (Poster Hall)

**Monday 1340h**

**Three-Dimensional Fault Architecture and Geometrical Segmentation from Fault Observations to Seismic Hazard Assessment II Posters (joint with G, S)**

*Presiding: Valerie Sahakian, University of Oregon; Isabelle Manighetti, GEOAZUR-OCA; Ruth Harris, U.S. Geological Survey; Neal Driscoll, Scripps Institution of Oceanog;*

1340h **T13I-0339 POSTER** Seismicity of the 2017 north Aegean Sea earthquake sequence: E Gorgun, D Kalafat, K Kekovali

1340h **T13I-0340 POSTER** Slow strain release along the eastern Marmara seismic gap offshore Istanbul in conjunction with enhanced local seismic moment release: P Martinez-Garzon, M Bohnhoff, D Mencin, G Kwiatek, G H Dresen, K M Hodgkinson, M Nurlu, F T Kadrioglu, R F Kartal

1340h **T13I-0342 POSTER** Velocity structure of the Sea of Marmara region from ambient noise and receiver function imaging: J Jenkins, R G Green, M Nurlu, M Bohnhoff

1340h **T13I-0343 POSTER** Geometry, Kinematics and Segmentation Characteristics of Strike-slip Faults in Halahatang area, North Tarim Basin, NW China: A Study Based on 3D Seismic Data: D Ma, D He
1340h **T13I-0344** POSTER The Comprehensive Isoseismal Map of North China: Y Lyu

1340h **T13I-0345** POSTER Normal fault connectivity through time: an example from the Chengbei fault in the Bohai Bay Basin, China: X Zhang, J Hubbard, W Zhiping, R V Almeida, Y Liu, Q Zhang, L Liu

1340h **T13I-0346** POSTER Evidence for Earthquake Rupture through a >30° Restraining Bend of the Altyn Tagh fault: V Prush, M E Oskin, J Liu, L Wu

1340h **T13I-0347** POSTER 3D geometry of the range front blind ramp and its impacts on deformation of the southern Longmen Shan, eastern Tibet: C Sun, Z Li, W Zheng

1340h **T13I-0348** POSTER Absence of shallow slip deficit during the Balochistan earthquake (2013, Mw 7.7, Pakistan): insights from SAR and optical-based coseismic slip model: B Lauer, R Grandin, Y Klinger, A Vallage, R Jolivet, A Delorme

1340h **T13I-0349** POSTER Towards Improved Probabilistic Seismic Hazard Assessment for Bangladesh: N W Khan, D M E Haque, M Selim, D A S M M Kamal

1340h **T13I-0350** POSTER Offshore fault geometries in the Pearl River Estuary, northern South China Sea: evidence from seismic reflection/refraction data: J Cao, H Xu, S Xia, J Sun, C Xiong

1340h **T13I-0351** POSTER Match filter, subspace detection and stress transfer mechanisms for gas-related seismicity in the Sea of Marmara, Turkey: J B Tary, L B Geli, A Lomax, B Evangelia, E C de la Hoz Lozano

1340h **T13I-0352** POSTER Slip Rate Dependence of Scaling Relationships for Fault Dimensions and Magnitude: J G Anderson, S G Wesnousky, G P Biasi, S Angster

1340h **T13I-0353** POSTER Multicycle Simulations of Fault Parameters of Mw6-7 Inland Faults: P Galvez, A Petukhin, P Somerville, A Skarlatoudis

1340h **T13I-0354** POSTER The anatomy of an ocean transform fault rupture: the 2016 M7.1 Romanche earthquake in the Mid-Atlantic from high-resolution local seismic and bathymetry data recorded with the PI-LAB experiment: J M Kendall, C Rychert, N Harmon, S P Hicks, S Tharimena, R E Abercrombie, D Schlaphorst, P Bogiatzis, I Grevemeyer, M Ligi, D Brunelli, S C Singh


1340h **T13I-0356** POSTER The Doty Fault Network: 3-D regional deformation applied to seismic hazard characterization in the forearc of Washington State: M L Anderson, T Lau, W von Dassow, T Reedy, A Sadowski, R Cakir, R Becerra, M Polenz, A Steely, T J Walsh, D K Norman, B L Sherrod, L Staisch, C Toth

1340h **T13I-0357** POSTER New insights into Seattle fault zone geometry: incorporating shallow offshore deformation using high resolution seismic reflection imagery: G Moore, E C Roland, S E K Bennett, J Kluesner, D S Brothers, B L Sherrod

1340h **T13I-0358** POSTER Paleoequartz Rupture Length and Magnitude along the Central and Southern Panamint Valley Fault System, Eastern California: I Sethanant, E Kirby, E McDonald

1340h **T13I-0359** POSTER Shallow fault geometry from differential lidar: examples from the 2010 Mw 7.2 El Mayor-Cucapah and 2016 Mw 7.8 Kaikoura earthquakes: J Lajoie, A Diederichs, E Nissen

1340h **T13I-0360** POSTER Characterizing the 3D Geometry of the Ventura-Pitas Point Fault System in Southern California and its Potential for Large, Multi-Segment Earthquakes: J Don, A Plesch, M M Newman, J H Shaw

1340h **T13I-0361** POSTER Rupture scenarios for the San Diego Trough and San Pedro Basin fault systems, offshore Southern California: New constraints combining marine geophysical, paleoseismic, and ground motion modeling investigations.: J M Bormann, C J Ruhl, G M Kent, N W Driscoll

1340h **T13I-0362** POSTER Analysis of Fault-Fold Structures along the Newport-Inglewood Rose Canyon Fault System at an unprecedented scale using 3D P-Cable seismic reflection data: J J Holmes, N W Driscoll, G M Kent

1340h **T13I-0363** POSTER 3D Structural and Kinematic Model of the Delaware Basin and Surrounding Structural Blocks for Application in Understanding Recent Seismicity: E Horne, P Hennings, C Zahm
Monday 1340h
**Crustal Formation, Fluid–Rock Reactions, and Subsurface Microbial Communities in the Samail Ophiolite: Results from the Oman Drilling Project and Related Research I Posters**

*(joint with B, T)*

**Presiding:** Damon Teagle, University of Southampton; Juerg Matter, University of Southampton; Peter Kelemen, Lamont Doherty Earth Observatory, Columbia University; Alexis Templeton, University of Colorado at Boulder;

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1340h **V13E-0138** POSTER Abundant Late-Stage Andraditic Garnet in Actively Serpentinizing Mantle Rocks in Oman and its Implications for Microbial Habitability: S K D Zeigler, E T Ellison, L E Mayhew, A S Templeton

1340h **V13E-0139** POSTER Biological methane cycling in serpentinitization-impacted fluids of the Samail ophiolite of Oman: E A Kraus, B W Stamps, K R Rempfert, D B Nothaft, E S Boyd, J M Matter, A S Templeton, J R Spear

1340h **V13E-0140** POSTER Compressional and shear wave velocities of mafic rocks collected from Oman Drilling Project: K Hatakeyama, I Katayama, N Abe, K Okazaki, B Ildefonse, Y Akamatsu

1340h **V13E-0141** POSTER Core-Log Integration across Crust-Mantle Transition in Oman: K Moe, Y Yamada, J M Matter, N Abe, E Takazawa

1340h **V13E-0142** POSTER Crystal-plastic fabrics within serpentinitized peridotites of Hole BA1B, BA3A and BA4A drilled by the Oman Drilling Project Phase 2 on D/V Chikyu: Y Kakihata, L Crispini, B Jamtveit, S Barbier, J Aslin, M Menzel, K Michibayashi, M Godard


1340h **V13E-0144** POSTER Drilling the Crust-Mantle Transition at Oman Drilling Project Sites CM1 and CM2: D A H Teagle, M Python, J Koepke, B D Payot, J M Guotana, N Dygert, N L Grambling, K T M Johnson, G Park, E Takazawa

1340h **V13E-0145** POSTER From Oman Drilling Tests to the Mohole to Mantle (M2M): K Moe, Y Yamada, S Saito, J M Matter, E Takazawa, K Michibayashi, D A H Teagle, P B Kelemen

1340h **V13E-0146** POSTER Geochemistry of the Samail ophiolite mantle section drilled at Oman Drilling Project Holes BA1B, BA3A and BA4A (Batin area, Oman Drilling Project Phase 2): R Senda, E Carter, J Zaloumis, C Zhang, A Sousa, D Klaessens, M Godard, P B Kelemen, K Michibayashi, D A H Teagle, E Takazawa, J A Coggon, S Choe


1340h **V13E-0148** POSTER Implication of lower crustal accretion process in the Oman ophiolite: Insight from Oman Drilling Project Hole GT2A: S Chatterjee, E Takazawa, K Michibayashi

1340h **V13E-0149** POSTER Influence of Hydrothermal Alteration on Elastic Wave Velocity of Mafic Rocks from the Oeyama and Semail Ophiolites: K Kimura, I Katayama, K Hatakeyama, Y Akamatsu, N Abe, K Okazaki


1340h **V13E-0151** POSTER Introduction to the Oman Drilling Project: D A H Teagle, P B Kelemen, J M Matter, A S Templeton, J A Coggon

1340h **V13E-0152** POSTER Magnetic remanence and rock magnetic variations across the crust-mantle transition of the Oman Ophiolite: First results of site CM1A of the Oman Drilling Project: A Greve, I Alsawafi, S Almusharafi
1340h V13E-0153 POSTER Micro-imaging spectroscopy of the Oman Drilling Project Phase 1 and 2 Drill Cores: R N Greenberger, B I Ehmann, P B Kelemen, D A H Teagle, C E Manning, M Harris, E Amador

1340h V13E-0154 POSTER Microbial sulfate reduction in the actively serpentinizing peridotite of the Samail Ophiolite, Oman: C Glombitska, M D Kubo, E T Ellison, A S Templeton, T M Hoehler


1340h V13E-0156 POSTER Overview of lithology and structure of a mantle section of the Oman Ophiolite (BA active alteration sites, Oman Drilling Project): an integrated field mapping and boreholes imaging study: J Noël, M Godard, E Oliot, B Célérier, Y Maillard, P B Kelemen, K Michibayashi


1340h V13E-0159 POSTER Preliminary Petrologic and Microstructural Characterization of a Metamorphic Section Beneath the Samail (Oman) Ophiolite: Results from the Oman Drilling Project Hole BT1B: A J Kotowski, E Bos Orent, M Cloos, T O D P Phase I Science Party

1340h V13E-0160 POSTER Tochilinite Occurrence in Serpentinized Peridotite from the Samail Ophiolite: B M Tutolo, K A Evans

1340h V13E-0161 POSTER Towards correlating between magnetic measurements conducted on core-material and magnetic downhole-logs obtained using a new borehole magnetometer: G Hong, A Greve, H Kim, J H Parq, S Almusharafi, I Alsawafi, N Abe, J L Till, K Moe, T Kanamatsu, S M Lee


1340h V13E-0163 POSTER X-ray CT images of oceanic lithologies obtained on Oman Drilling Project drillcores during ChikyuOman 2017 and 2018: T Morishita, K Michibayashi, P B Kelemen, M Godard, E Takazawa, D A H Teagle, M Harris

1340h V13E-0164 POSTER Investigating remagnetization of the southern massifs of the Oman ophiolite using rock magnetism: L Koornneef, A Morris, M J Dekkers, M Harris

1340h V13E-0165 POSTER Drilling of the crust - mantle boundary in the Wadi Tayin massif in the Samail ophiolite at Oman Drilling Project Sites CM1 and 2: E Takazawa, D A H Teagle, J A Coggon, J M Matter, P B Kelemen, K Michibayashi, Y Tamura, T Morishita


1340h V13E-0167 POSTER Experimental determination of the serpentinization rates of orthopyroxene using synthetic fluid inclusions as micro-reactors: H M Lamadrid, Z Zajacz

1340h V13E-0168 POSTER To Study An On-land Ultraslow-spread Ocean Ridge, Go to Xigaze, Tibet: T Liu, C Z Liu, F Y Wu


1340h V13E-0170 POSTER Variability in the foliated gabbros of the Northern Ibra Valley, Southern Oman Ophiolite: C Luna, M P Loocke, J C J Lissenberg, C J MacLeod

1340h V13E-0171 POSTER Experimental Investigation of Reaction-Driven Deformation, Cracking and Permeability During Serpentinization: R M Skarbek, H M Savage, P B Kelemen

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T14A (MM) Liberty N-P

Monday 1600h

East Asia Tectonic and Geodynamic History Since the Mesozoic II (joint with DI, S, V)

Presiding: Jonny Wu, University of Houston; Kenichiro Tani, National Museum of Nature and Science; Lorenzo Colli, University of Houston; Jinwei Gao, Institute of Deep-sea Science and Engineering, Chinese Academy of Sciences;
1600h **T14A-01** Western Pacific Lithospheric Thermal Perturbations and Sublithospheric Density Anomalies: C F Li, D Zhou, J Wang

1615h **T14A-02** What exactly is the “Paleo-Pacific plate” in East Asia? 3-D mapping of the remnant slabs in the lower mantle and their connections with the Mesozoic subduction and accretion history in East Asia: Y Liu, J Suppe

1630h **T14A-03** Post-rift Tectonic History of the Cretaceous Songliao Basin, NE China: Thermal Events and Post-rift Unconformities Driven by Orogenic Pulses From Plate Boundaries: Y Song, J Ren, A Stepashko

1645h **T14A-04** Geochemical constraints on Pacific-Izanagi ridge subduction along the NE Asian margin from the magmatic record of Japan, Sikhote-Alin and Sakhalin: T J Wu, J Wu

1700h **T14A-05** Isostatic effects of Mesozoic and Cenozoic sediments in East Asia: X Yu, Z Guo

1715h **T14A-06** Mid-Miocene Transition from Rigid to Soft Plate Tectonics in the Northern Tibetan Plateau: A Lookback after 20 Years of Tests: Y Yue, B D Ritts, S A Graham, J G Liou, C L Johnson, J K Hourigan, G Zhuang, A D D Hanson, Z Zhang

1730h **T14A-07** Paleomagnetic and geochronological results from the Zhela and WeiMei Formations lava flows of the eastern Tethyan Himalaya: New insights on the breakup of eastern Gondwana: W Bian, T Yang, Y Ma, J Jin, F Gao, S Wang, W Peng, S Zhang, H Wu, H Li, L Cao, Y Shi

1745h **T14A-08** Lateral translation of the Burma Platelet since the late Cretaceous: An Asian analogue for the Baja-BC hypothesis?: A Licht, J Westerwel, P J Roperch, G Dupont-Nivet, Z Win, H H Swe, M Kaythi, T Ugrai, V Littell, M Park, D Jones, F Poblete, D W Aung, H Huang, M C Hoorn, K Sein

1615h **T14B-02** Evidence for mixed-mode failure at shallow crustal levels, Hungaroa Fault Zone, Hikurangi Subduction Margin, New Zealand: C J Boulton, T A Little, A Niemeijer, M F Hamers, S M Ellis

1630h **T14B-03** Direct measurement of fault pore pressure during aseismic and seismic slip: D A Lockner, B Proctor, B D Kilgore, T M Mitchell, N M Beeler

1645h **T14B-04** Illuminating faulting complexity of the 2017 Yellowstone (Maple Creek) earthquake swarm: D R Shelly

1700h **T14B-05** Antigorite Slip During Dehydration: Rig Compliance and Loading Condition Experiments: E Burdette, G Hirth

1715h **T14B-06** Crack models of repeating earthquakes predict observed moment-recurrence scaling: C Cattania, P Segall

1730h **T14B-07** Laboratory Finite Source Inversion: Reaching Maximum Resolution by Sensitivity Analysis and Practical Improvements: J M Parker, S D Glaser

1745h **T14B-08** Comparing seismic, mechanical, and geometrical asperities observed in a laboratory granite fault undergoing stick-slip cycles: Z Jin, H Sone, T Goebel, I Abrams, G H Dresen

**T14C (MM) Liberty L**

**Monday 1600h**

**Subduction Zone Processes, Orogenesis, and Seismic Hazard: From the Alpine Mediterranean to the Indo-Burma Region I** ©

*(joint with G, NH, S, V)*

**Presiding:** Patricia Persaud, Louisiana State University; Francesca Di Luccio, National Institute of Geophysics and Volcanology; Claudia Piromallo, National Institute of Geophysics and Volcanology; Michael Steckler, Lamont-Doherty Earth Obs;

1600h **T14C-01** On the increasing size of the orogens moving from the Alps to the Himalayas in the frame of the net rotation of the lithosphere: C Doglioni, M Cuffaro

1615h **T14C-02** Fast dismantling of a mountain belt by slab retreat and mantle flow: late-orogenic evolution of Pyrenees and Liguro-Provençal rifting: L Jolivet, A Romagny, C Gorini

1630h **T14C-03** Characterization of the Deep Structure of the Alboran Basin (Western Mediterranean) by Refraction and Reflection Seismic Data: L Gomez de la Pena, I Grevemeyer, H Kopp, J Diaz Cusi, J Gallart, C Ranero, E Gràcia
1645h **T14C-04** The Geophysical Structure and Deformational Regime of the Arabian-Eurasia Collision: E A Sandvol, A Kaviani, J Nabelek, K G Mackey, G Yetirmishli, T Godoladze, H Babayan, A Malovichko

1700h **T14C-05** Preliminary Seismicity Observed by the Seismic Monitoring Network in the Kingdom of Bhutan: S Ohmi, H Inoue, J Chophel, P Pelgay, D Drukpa

1715h **T14C-06** Exploring Mantle Kinematics And Dynamics Topography Related To Continental Subductions During India/Asia Collision: A Replumaz, P Pitard, T Shen, F Funiciello, L Husson, G Wang, C Faccenna

1730h **T14C-07** Controls on the geometry and evolution of fold-thrust belts: applications to the Makran accretionary prism and Indo-Burman Ranges: T V Ball, C Penney, J A Neufeld, A Copley

1745h **T14C-08** The Myanmar National Seismic Network: Performance, monitoring, and ground motions from 2.5 years of real-time seismic data: E Wolin, Y M MIN Htwe, T L Kyaw, P P Tun, S E Hough, A T Ringler, R E Anthony
Session Information

Oral Sessions
Sessions are being held in the Convention Center (CC) and Marriott Marquis (MM)

Poster Sessions
Posters are on display in the following venue throughout the week:
Hall A-C (Poster Hall)

Session & Paper Numbering
Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation.
Example: A21A-01 = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

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The program is current as of 06 December 2018. An omitted abstract ID number in the presentation order indicates that the abstract has been withdrawn by the presenter from the session. Please refer to the online program at https://agu.confex.com/agu/fm18/meetingapp.cgi/Home for updates.

Tuesday A.M.

DI21A (MM) Archives

Tuesday 0800h

Subducting Slabs in the Mantle I 🌐 (joint with MR, S, T, V)

Presiding: Karin Sigloch, University of Oxford; Zhongwen Zhan, CalTech Seismological Laboratory; Fanny Garel, Géosciences Montpellier; Sylvie Demouchy, Géosciences Montpellier;

0800h DI21A-01 A strong seismic reflector above the Kamchatka slab in the lower mantle: S S Wei, P M Shearer

0815h DI21A-02 Slab Behavior beneath Eastern Asia from Full Waveform Inversion: S P Grand, K Tao, F Niu
0800h **S21C-0442** POSTER An earthquake swarm beneath Sulzberger Ice Shelf in Antarctica, II: Source properties of its largest earthquake (Mw5.6) on June 1, 2012: **Y Xu**, L Wen

0800h **S21C-0443** POSTER Detection of Gutenberg-Richter b-value changes in earthquake time series: **B Fiedler**, S Hainzl, G Zöller, M Holschneider

0800h **S21C-0444** POSTER Spatial relationship between upper crustal structures and seismicity in the northwestern Kii Peninsula, southern Honshu, Japan: **S Maeda**, M Otsubo, T Matsuoka

0800h **S21C-0445** POSTER A Comprehensive Analysis of Radiated Seismic Energy Release Along the Guerrero Segment of the Mexican Subduction Zone: **R O Plata Martinez**, X Perez-Campos, S K Singh

0800h **S21C-0446** POSTER Variations in Energy-to-Moment ratios along the Sumatra subduction zone: **N Saloo**, E Okal

0800h **S21C-0447** POSTER Determination of Focal Depths, Moment Magnitudes and Focal Mechanisms of Small Magnitude Local and Regional Earthquakes Recorded by a Sparse Seismic Network: **N R Dahal**, J Ebel

0800h **S21C-0448** POSTER Energetic onset of earthquakes: **M Denolle**

0800h **S21C-0449** POSTER A study on analysis of earthquake parameter using LM (Levenberg-Marquardt) inversion algorithm: **S Wee**, J Kim, Y Seong-hwa

0800h **S21C-0450** POSTER Evaluation of source parameter estimates with Markov Chain Monte Carlo method: **N Yoshimitsu**, T Maeda, W L Ellsworth

0800h **S21C-0451** POSTER Robust Analysis of Stress Drop Variation along San Andreas Fault at Parkfield Using Multiple Local Networks: **X Chen**, J Zhang, R E Abercrombie

0800h **S21C-0452** POSTER Comparison of Brune-type Stress Drops Estimated from Direct S and Coda Waves: **W Wang**, P M Shearer

0800h **S21C-0453** POSTER Mechanism of microearthquakes from acoustic emission in a laboratory: How to evaluate efficiently a large amount of data: **J Sileny**, Z Jechumtalova, M Petruzaček

0800h **S21C-0454** POSTER Locating and estimating full moment tensors of acoustic emission events in samples under high pressure and temperature: **L Zhu**, Z Li, Y Wang, F Shi

0800h **S21C-0455** POSTER Full Moment Tensor Waveform Inversions of Moderate Earthquakes and Seismic Source Categorization: **Q Bai**, S Ni
0800h S21C-0456 POSTER Potential Seismic Hazards in the Paleo-Rifting Region of the East Sea (Sea of Japan): J Lee, S Rhee, W Kim, T K Hong

0800h S21C-0457 POSTER Focal Mechanisms Inversion for Stress Tensor and Fault Plane Identification Using the Genetic Algorithm: R Ouyed VI, M S Boughacha

0800h S21C-0459 POSTER Stress Loading in the Northern Ibaraki Prefecture, Northeast Japan, Inferred from Geodetic and Seismicity Data: T Uchide, M Ohtani, M Takahashi, K Imanishi

0800h S21C-0460 POSTER Characterizing crustal seismicity and its associated stress field in Chile: C Herrera, J F Cassidy, S E Dosso

0800h S21C-0461 POSTER Revised Catalogue of Moment Tensors of 2016-2017 Central Italy Seismic Sequence and Uncertainty for Source Parameters of Mainshocks: F Magnoni, L Scognamiglio, E Tinti, E Casarotti

0800h S21C-0462 POSTER Spatial variation of radiation efficiency during the 2016-2018 Central Italy seismic sequence: G Calderoni, A Rovelli, R Di Giovambattista

0800h S21C-0463 POSTER Source Parameters and Radiation Efficiency in the nucleation volume of the Mw 6.1 L'Aquila Earthquake: G Calderoni, R Di Giovambattista, A Rovelli

0800h S21C-0464 POSTER Reconstruction of Fault Geometry Through Hypocenter Clustering for Coulomb Stress Analysis During the L'Aquila Earthquake Swarm.: B Brunsvik, G Morra, G Cambiotti, L Chiaraaluce, R Di Stefano, M Michele, D A Yuen

0800h S21C-0465 POSTER Events Relocation and Source Parameters of Central Brazil Earthquakes: J Carvalho, L V Barros, J Zahradnik

0800h S21C-0466 POSTER Determination of a local magnitude scale using earthquake data recorded by the borehole seismic network in Taiwan: T S Lai, Y M Wu

0800h S21C-0467 POSTER A dynamic rupture model of the 1999 Chi-Chi, Taiwan Earthquake: J Liao, D D Oglesby, K F Ma

0800h S21C-0468 POSTER The multi-fault rupture process of 1935 Hsinchu-Taichung Earthquake, Taiwan revealed from dynamic modeling: H Su, M H Yen, D D Oglesby, K F Ma

0800h S21C-0469 POSTER Examination of Hypocenter Depth for Normal Fault Type Earthquakes Off Fukushima Region: S Murotani, K Satake

0800h S21C-0470 POSTER Earthquake scaling relationships from geodetically derived slip distributions: C Brengman, W D Barnhart, E H Mankin

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S21E (CC) Hall A-C (Poster Hall)

Tuesday 0800h

Heterogeneity and Scaling Relations Impacting the Geomechanical Behavior of Fault Zones Posters

Presiding: Martin Schoenball, Lawrence Berkeley National Laboratory; Paul Selvadurai, ETH Zurich; Patricia Martinez-Garzón, Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences; James Kirkpatrick, Colorado State University;

0800h S21E-0483 POSTER Multicomponent Model of Crustal Stress at Cajon Pass with Implications for Stress Field Heterogeneity: E C Helgans, K M Luttrell, B R Smith-Konter

0800h S21E-0484 POSTER 3D Absolute Stress Fields in the Source Region of the 1992 Landers Earthquake: T Terakawa, E Hauksson

0800h S21E-0485 POSTER Are the Long Recurrence Intervals of Small Repeating Earthquakes due to the Slow Slip Rates of Small Fault Strands?: J R Williams, J Hawthorne, O Lengliné

0800h S21E-0486 POSTER Stress Accumulation Rates of the San Andreas Fault System Derived from Spatial Variations in Crustal Rigidity: L M Burkhard, B R Smith-Konter

0800h S21E-0487 POSTER Seismic Imaging of the West Napa Fault in Napa, California: M Goldman, R Catchings, J H Chan, R R Sickler, J M Nevitt, C Criley

0800h S21E-0488 POSTER Upper Crustal Structure and Velocities of the Hayward Fault Zone Determined From the 2016 East Bay Seismic Experiment: L M Strayer, R Catchings, J H Chan, R Ian, A McEvilly, M Goldman, C Criley, R R Sickler

0800h S21E-0489 POSTER Variations in Seismogenic Thickness and Tectonic Stress Revealed by a Decade of Relocated Microseismicity from the Central Alpine Fault, New Zealand: K Michailos, C J Chamberlain, M K Savage, J Townsend

0800h S21E-0490 POSTER Experimental investigation of the effect of fault architecture on fluid pressurization due to injection: T M Iwalewa, Y Edery, J R Rice, D Weitz

T21A (MM) Liberty N-P

Tuesday 0800h

Active Tectonics, Seismicity, and Surface Processes Interactions in South and East Asia I (joint with EP, NH, S)

Presiding: J Bruce Shyu, National Taiwan University; Brian Yanites, Indiana University Bloomington; Xiwei Xu, Institute of Crustal Dynamics, China Earthquake Administration; Takashi Azuma, Geological Survey Japan;

0800h T21A-01 Stratified crustal shortening under the Longmenshan thrust belt, eastern Tibetan plateau: X Xu, J H Shaw

0815h T21A-02 Evolution of Aftershocks along Longmenshan Fault Zone: J Wu, X Liu, C Liang, Z Peng, Q Qian, P Du

0830h T21A-03 Stepped expanding of the southeast edge of the Tibetan Plateau in the Sichuan-Yunnan block area during late Cenozoic: G Wang, G Wu, K Cao, C Zhu, P H Leloup, A Replumaz

0845h T21A-04 Seismicity, Metamorphism, and Fluid Evolution Across the Northern Cascadia Fore Arc: G Savard, M G Bostock, N I Christensen

0900h T21A-05 Active tectonics of the Nantinghe fault in the southeastern margin of the Tibetan Plateau: S Feng, H He, A L Densmore, Z Wei, H Sun

0915h T21A-06 The interaction pattern between stable mini block and active geological surroundings during the extrusion of Chuanidian Block: A study case of the Yanyuan Basin revealed from the near-surface shear wave velocity structure: Y Tian, W Wang, L Li, C Yu, C Qu

0930h T21A-07 How far does the Growth of Eastern Tibetan Plateau influence on South China?: M An, M Feng

0945h T21A-08 Recent Ground Fissures in the Hetao Basin, Inner Mongolia, China: Z He

T21B (MM) Liberty L

Tuesday 0800h

The Varied Roles of Aqueous Fluids near the Subduction Interface I (joint with MR, S, V)

Presiding: Cailey Condit, Massachusetts Institute of Technology; Besim Dragovic, Boise State University; Jonathan Delph, Rice University; Melodie French, Rice University;

0800h T21B-01 The Ingredients of Slow Fault Slip: R Burgmann

0815h T21B-02 Cyclical Variations in Fluid Pressure and Composition During Brittle Faulting in an Exhumed Analogue of Shallow Megathrusts (N-Apennines, Italy) From Field, Microstructural and RRE Investigations: F Remitti, A Cerchiari, A Cipriani, A Festa, S Mittempergher, F Lugli, S Lugli

0830h T21B-03 Mechanism of fluid flow near the plate interface: the importance of a thin, low viscosity layer: M Morishige

0845h T21B-04 Seismicity, Metamorphism, and Fluid Evolution Across the Northern Cascadia Fore Arc: G Savard, M G Bostock, N I Christensen

0900h T21B-05 Records of Contrasting Patterns of Fluid Flow Along the Base of the Mantle Wedge from 30–20 km Depths in the Sanbagawa Belt, Japan: S R Wallis, M Yokota, Y Kouketsu, S Endo

0915h T21B-06 Multi-stage history of fluids and faults in serpentinites on Syros, Greece: E H G Cooperdock, D F Stockli, N H Raia, J Barnes

0930h T21B-07 Dehydration embrittlement and compaction instabilities in subduction zones: I Stefañou, J Sulem, N Brantut

0945h T21B-08 Seismogenesis of Dual Subduction Beneath Kanto, Central Japan Controlled by Fluid Release: S Yoshioka, Y Ji, V C Manea, M Manea

T21C (MM) Liberty M

Tuesday 0800h

Three-Dimensional Fault Architecture and Geometrical Segmentation from Fault Observations to Seismic Hazard Assessment I (joint with G, S)

Presiding: Valerie Sahakian, University of Oregon; Isabelle Manighetti, GEOAZUR-OCA; Ruth Harris, U.S. Geological Survey; Neal Driscoll, Scripps Institution of Oceanog;

0800h T21C-01 Surface faulting associated with the 2016 Mw 7.8 Kaikoura earthquake: complexity of ruptures, 3D structure, geological history and fault source definition: K R Berryman, P Villamor, N J Litchfield, R M Langridge, T Little, A Nicol Prof, J N Williams, J Kearse, S M Ellis, D M Eberhart-Phillips, M Rattenbury, D Townsend, S C Bannister

0815h T21C-02 Fault Segmentation Controls on Stratal Geometry and Morphology; New Insights from 3D P-Cable data Offshore Southern California: H Perea, J J Holmes, N W Driscoll
0830h **T21C-03** Precariously balanced rocks in northern Utah: are Wasatch Fault earthquakes worse than expected?: **A Sorscher**, A A Allam, A D Armstrong, C Richards, S Clairmont, A McKell

0845h **T21C-04** The Persistence of Rupture Segmentation from a Worldwide Survey: **B Philibosian**, A J Meltzer

0900h **T21C-05** How Faults Grow (A)Seismically Into Complex Networks: **S Preuss**, R Herrendoerfer, T Gerya, J P Ampuero, Y van Dinther

0915h **T21C-06** Earthquake-related off-fault damage on nonplanar fault: **M Y Thomas**, H S Bhat

0930h **T21C-07** Dynamic rupture simulation along the southern San Andreas Fault through the San Gorgonio Pass – Effects of fault geometry and 3D velocity model: **G Li**, Y Liu

0945h **T21C-08** Extreme Fault Connectivity and What It Means for Seismic Hazard Models: **M T Page**, N van der Elst, E H Field, K R Milner

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**T21D (CC) Hall A-C (Poster Hall)**

**Tuesday 0800h**

**Crystallographic Fabrics and Microstructures: Geodynamic Marker of Earth's History and Today's Internal Structure II Posters 📅**

**Presiding:** Katsuyoshi Michibayashi, Nagoya University; Junfeng Zhang, China Univ. of Geosciences; Haemyeong Jung, Seoul National University;

0800h **T21D-0223** POSTER Viscous flow of nano-granular materials lubricates faults during earthquake propagation.: **G Pozzi**, N De Paola, R Holdsworth, S B Nielsen, L Bowen, E Dempsey

0800h **T21D-0224** POSTER Lattice preferred orientation development in magnesite aggregates: **C W Holyoke III**, R K Wells, J W Millard, A K Kronenberg, P Raterron, L Tokle

0800h **T21D-0225** POSTER Effect of a pre-existing lattice preferred orientation on the strength of foliated quartzite: **C Braccia**, R K Wells, C W Holyoke III

0800h **T21D-0226** POSTER Omphacite Preferred Orientation in Eclogite Preserves Transpression-Transension Switch from High-Pressure Metamorphism to Deep-Crust Exhumation in a Migmatite Dome: **D Whitney**, C Teyssier, M Korchinski, N C Seaton, B C Bagley, P F Rey

0800h **T21D-0227** POSTER Dissolution-precipitation induced strong CPO of jadeite in UHP jadeite quartzite from Shuanghe, Dabie Mountains, China: **X Wang**, J Zhang, W Liu, F Shi

0800h **T21D-0228** POSTER Kyanite-quartz-rich veins within the Maobei eclogites from the Sulu terrane (eastern China) reveal exhumation-related deformation: **Y Wang**, J Zhang, P Liu, Y Wu

0800h **T21D-0229** POSTER Applying quartz fabric intensity parameters to delineate strain gradients across shear zones: examples from the Main Central thrust in western Bhutan: **J K Starnes**, S P Long, J Zhang, S M Gordon

0800h **T21D-0230** POSTER Deformation Fabric Analysis using AMS and EBSD in the Precambrian Rocks of Dharwar Craton (South India) – Implications for Kinematic Studies: **S Goswami**, M A Mamanti

0800h **T21D-0231** POSTER On the fabric development and deformation mechanism in sheared chlorite at high temperature and high pressure: **W Liu**, J Zhang, A Tommasi, F Barou

0800h **T21D-0232** POSTER Deformation of feldspar at greenschist facies conditions – the record of mylonitic pegmatites from the Pfunderer Mountains, Eastern Alps: **F Hentschel**, C Trempmann, E Janots

0800h **T21D-0233** POSTER Deformation fabrics of glaucophane schists and implications for seismic anisotropy: the importance of lattice preferred orientation of phengite: **Y HA**, H Jung, L A Raymond

0800h **T21D-0234** POSTER Static stage of exhumation of metamorphic rocks recorded in garnets: Evidence of EBSD-EPMA mapping: **Y Kouketsu**, M Enami

0800h **T21D-0235** POSTER Effect of water on the dislocation mobility in garnet: Evidence from the Shuanghe UHP eclogites, Dabie orogen, China: **Z Xie**, X Liu, Z Jin

0800h **T21D-0236** POSTER New crystal preferred orientation of amphibole experimentally deformed in simple shear: **J Kim**, H Jung

0800h **T21D-0237** POSTER Fracturing and the Development of Ductile Shear Zones in the Lower Crust: **T Okudaira**, Y Soda, Y Harigane

0800h **T21D-0238** POSTER Investigating deformation processes and the rheology of polyphase lower crust: Integrated structural and textural analysis of naturally deformed granulites from the Mount Hay block of central Australia: **L Shea**, S C Kruckenberg

0800h **T21D-0240** POSTER Crystallographic Preferred Orientations of Serpentinites Analyzed by Synchrotron Diffraction: **J Behrmann**, R Kuehn, M Stipp, B Leiss

0800h **T21D-0241** POSTER On the formation of olivine and enstatite fabrics during antigorite dehydration in a foliated serpentinite: **H Qi**, J Zhang, J Li
T21D-0242 POSTER Direct evidence of water infiltration from a transform fault: Marion transform fault, Southwest Indian Ridge: Y Kakihata, K Michibayashi, H J Dick

T21D-0243 POSTER Upper mantle deformation along the North Anatolian Fault Zone constrained from xenoliths: V Chatzaras, B Tikoff

T21D-0244 POSTER Evolution of the olivine fabrics in amphibole peridotite from the Åheim, Norway, and its implications for seismic anisotropy in mantle wedge: S Jung, H Jung

T21D-0245 POSTER Crystallographic fabrics and microstructures of the Yugu Peridotites in the Gyeonggi Massif, Korea: Implications for Olivine Fabric Transition in Mantle Shear Zones: H Jung, M Park

T21D-0246 POSTER Quantitative analyses of olivine textures within granular peridotites based on EBSD mapping: an example from the Oman ophiolite: K Michibayashi, A Onoue, Y Kakihata, S Oya, N Odashima

T21E (CC) Hall A-C (Poster Hall)

Tuesday 0800h

Flow and Fracture: Mixed Brittle-Viscous Behavior Throughout the Lithosphere II Posters © (joint with MR, NH, S, V)

Presiding: Christie Rowe, McGill University; Whitney Behr, University of Texas at Austin; Christopher Gerbi, University of Maine; Andre Niemeijer, Utrecht University - Faculty of Geosciences - HPT Laboratory;

0800h T21E-0247 POSTER Repeated Ductile-Brittle-Ductile Flow During the Emplacement of Silicic Lava: Strain Rate-Dependent Deformation, Tephra Production, and Healing: S Isom, G D Andrews, A G Whittington

0800h T21E-0248 POSTER Role of Microscale Stress in the Viscous Regime: J Hodge, C C Gerbi, S E Johnson, S S Vel

0800h T21E-0249 POSTER Force Distribution in a Two-Phase Medium During Simple Shear: C R Ladd, J E Reber

0800h T21E-0250 POSTER Jamming and mixed brittle-viscous deformation of subduction zone mélange: A Beall, A Fagereng, S M Ellis

0800h T21E-0251 POSTER Deformation characterization in a shear zone within the Cretaceous Chugach accretionary prism, Southcentral Alaska: V T Yakimova, E S Nadin

0800h T21E-0252 POSTER Mineralogical Fingerprints of Concomitant Brittle and Ductile Deformation Under High Pore Fluid Pressure: The Example of the Neves Shear Zones (Tauron window, Alps, Italy): P Goncalves, T Leydier, P Lanari

0800h T21E-0253 POSTER Stable and unstable slip behaviors of basalt gouge controlled by fluid pressure, temperature and grain size: L Zhang

0800h T21E-0254 POSTER Rheology of a Brittle-plastic Transition Along an Exhumed Intra-arc Strike-slip Fault: An Example from the Atacama Fault System, Northern Chile: R C Ruthven, J Singleton

0800h T21E-0255 POSTER Modeling Diagenesis on Subduction Interfaces: J N Hooker, D M Fisher, D O Oakley

0800h T21E-0256 POSTER Low temperature brittle-ductile deformation associated with uranium mineralization in the footwall of the Mesozoic Chatham normal fault, Virginia: C J Potter, J S Beard, J G Aylor Jr

0800h T21E-0257 POSTER Propagating mineralising fluids through chemical shear zones: T Poulet, M Lesueur, M Veveakis, K Regenauer-Lieb

0800h T21E-0258 POSTER Constraining fault-valve behavior at Val d Or, Quebec.: N Ogasa, J D Kirkpatrick, V van Hinsberg


0800h T21E-0260 POSTER Rock Fracture Mechanics Under Chemically Reactive Conditions: P Eichhubl, X Chen, J R Major, O Callahan, J E Olson

0800h T21E-0261 POSTER Natural Fracture Network Formation in Low Permeability Media under Sedimentation: N Guy, Z Ouraga, A Pouya

0800h T21E-0262 POSTER Scale-Dependent Brittle-Ductile Rheology: Insights from Laboratory Experiments.: N Sgreva, A Davaille, I Kumagai, K Kurita

0800h T21E-0263 POSTER Strength of mixed rheology fault systems in the brittle-ductile regime: C von Hagke, M Herwegh

0800h T21E-0264 POSTER High-resolution crustal Lg-wave tomography in Sichuan-Yunnan region and its tectonic implications: Y Song, L Zhao, X B Xie, Z Yao

0800h T21E-0265 POSTER Rheology of a subgreenshist-facies quartzite shear zone in the Blue Ridge thrust system near Front Royal, Virginia: J Singleton, J M Rahl, K S Befus

0800h T21E-0266 POSTER Quartz Fluid Inclusion Abundance and Off-Fault Damage in a Deeply Exhumed Seismogenic Fault: W J Song, S E Johnson, C C Gerbi
T21F (CC) Hall A-C (Poster Hall)
Tuesday 0800h
Subduction Top to Bottom-2 IV Posters

**Presiding:** David Scholl, University of Alaska Fairbanks; Gray Bebout, Lehigh University; Laura Wallace, University of Texas at Austin;

0800h T21F-0267 POSTER Twenty Years of Subduction Zone Science: Subduction Top to Bottom 2 (ST2B-2): D W Scholl, G E Bebout, R J Stern, L M Wallace, P Agard

0800h T21F-0268 POSTER Plume-plateau interaction: Insight from numerical modelling: M Baes, S V Sobolev, T Gerya

0800h T21F-0269 POSTER Variation in Sediment Thickness, Subducting Basement Topography, and Frontal Prism Structure Along the Nankai Trough: K A Donovan, H Tilley, J Lackey, G F Moore

0800h T21F-0270 POSTER High Resolution Seismic Imaging of Protothrusts at the Nankai Subduction Zone: H Tilley, G F Moore, M Yamashita, S Kodaira

0800h T21F-0271 POSTER Physical properties of subducting oceanic crust from spatial mapping using dense seismic reflection data off Kumano in Eastern Nankai Trough: M Yamashita, S Kodaira, Y Nakamura, A Nakanishi, M Nakano, S Miura, G F Moore

0800h T21F-0272 POSTER K-Ar dating of fossil seismogenic thrusts in the Shimanto accretionary complex, southwest Japan: S Tonai, D M Fisher, D O Oakley, Y Hashimoto, N Tomioka

0800h T21F-0273 POSTER A 2D Tomographic P-Wave Velocity Model for the Incoming Nazca Plate Adjacent to the 2014 Iquique Earthquake: E K Myers, A M Trehu, K K Davenport, E C Roland

0800h T21F-0274 POSTER Heterogeneous Upper Plate Extension in South Central Chile and Implications for Megathrust Fault Development: K Olsen, N L Bangs, A M Trehu, E Contreras Reyes

0800h T21F-0275 POSTER 2D pre-stack depth migration imaging across the 2011 Tohoku (Mw,9.0) coseismic rupture zone off NE Japan: C Guo, J O Park

0800h T21F-0276 POSTER Investigation of Deep Seismic Reflections Beneath the Accretionary Prism of the Chile Subduction Zone in South-Central Chile: E Zhang, A M Trehu, N L Bangs, E Contreras Reyes

0800h T21F-0277 POSTER Coulomb stress change of inland faults during a megathrust earthquakes cycle: T Mitogawa, T Nishimura

0800h T21F-0278 POSTER Ambient noise tomography across Ecuador: Upper-plate structure coincident with the Carnegie Ridge and the southernmost extremity of mega-thrust earthquakes: C Lynner, S L Beck, C D Koch, A Metlzer, L Soto-Cordero, M C Ruiz, A P Alvarado, P Charvis, Y Font, M M Regnier, H Agurto-Detzel, A Rietbrock

0800h T21F-0279 POSTER Distinguishing Intraplate from Megathrust Earthquakes Using Lacustrine Turbidites: M E Van Daele, C Araya-Cornejo, T Pille, J Moernaut, S Sabine, P Kempf, I Meyer, K Vanneste, M A Cisternas

0800h T21F-0280 POSTER Subduction structure beneath the western part of Kii Peninsula, southwestern Japan, revealed by active and passive seismic experiments: E Kurashimo, T Iidaka, N Tsumura, H Nakasako, T Iwasaki, N Hirata

0800h T21F-0281 POSTER Paleo-Stress In An Exhumed Cretaceous Accretionary Complex, Shimanto Belt, In Konan City And Geisei Villege, Kochi Prefecture, SW Japan: M Hashiguchi, Y Hashimoto


0800h T21F-0284 POSTER 3D Kinematic Modeling and Restoration of the Costa Rican Margin: Unraveling a Complex Geologic and Tectonic History of Subduction: B Gose, N L Bangs, J Edwards

0800h T21F-0285 POSTER Deep structure of the Grenada Basin from wide-angle seismic, bathymetric and gravity data: F Klingelhofer, C E Padron, C Garrocq, B Marcaillou, S Lallemand, M Laigle, W R Roest, J F Lebrun, D Graindorge, M O Beslier, P Münch

0800h T21F-0286 POSTER Characterizing the Neogene tectono-sedimentary evolution of the Northern Lesser Antilles forearc: a land-sea study: J J Léticée, J J Cornée, E Leveneur, M BouDagher-Fadel, F Quillevere, M Melinte-Dobrinescu Sr, M M Philippon, P Münch, M Laurencin, B Marcaillou, F Klingelhofer, J F Lebrun, S Lallemand
0800h  **T21F-0287 POSTER** Seismotectonic Characterization of Valparaíso, Central Chile Region, Using Local Earthquake Tomography: **A P Navarro-Aránguez**, D Comte, M Farías, S W Roecker, A Rietbrock

0800h  **T21F-0288 POSTER** Boron and its isotopes track the development of shallow slab outfluxes in the Mariana forearc: new insights from IODP Expedition 366 serpentinites: **J G Ryan**, S Agostini, I P Šavó, O Jensen, R Johnston

0800h  **T21F-0289 POSTER** Episodic Buckling and Collapse -- The Breathing Subduction Zones: **J Behura**, M Prasad, F Forghani


0800h  **T21F-0291 POSTER** Major and Trace Element Zoning in Garnets of Unusual Size from Blocks Hosted by Ultramafic Mélange, Santa Catalina Island, California: **A L Canada**, J G Karroum II, L Paras, J S Lackey, F Z Page


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**T21G (CC) Hall A-C (Poster Hall)**

**Tuesday  0800h**

**Subduction Top to Bottom-2 V Posters**

**Presiding: David Scholl**, University of Alaska Fairbanks; **Gray Bebout**, Lehigh University; **Laura Wallace**, University of Texas at Austin;

0800h  **T21G-0293 POSTER** Deformation of metabasalts in megathrust shear zones exposed on Kyushu Island, Japan.: **C J Tulley**, A Fagereng, K Ujiie

0800h  **T21G-0294 POSTER** Ion Microprobe Depth Profile Analysis of Micron-Scale Metamorphic Rims on Detrital Zircons from the Pelona Orocopia Rand Schist: **E A Langdon-Lassagne**, M Grove, B F DeJarnatt, J K Hourigan, C E Jacobson

0800h  **T21G-0295 POSTER** Depth-profile laser-ablation split-stream ICP-MS analysis of metamorphic zircon rims from the Orocopia Schist: Implications for the chronology of erosion and underplating during flat-slab subduction.: **B F DeJarnatt**, J K Hourigan, C E Jacobson, M Grove, G B Haxel

0800h  **T21G-0296 POSTER** Petrology and Geochemistry of Lawsonite-bearing Metabasalt and Metagabbro in the Svrlighars Massif, Turkey: **P Kang**, D Whitney, K Fornash

0800h  **T21G-0297 POSTER** Implications of Subduction Obliquity to the Inferences of Seismic Anisotropy in the Mantle Wedge: **L M Kenyon**, I Wada

0800h  **T21G-0298 POSTER** Hydrous mantle melting near the base of the mantle wedge: How does the addition of a slab component change the first melts of vapor-saturated Iherzolite?: **T L Grove**, C B Till

0800h  **T21G-0299 POSTER** A Global View On Arc-Trench Connectivity And Andesite Petrogenesis: **S M Straub**, A Gomez-Tuena

0800h  **T21G-0300 POSTER** Ce-anomalies, elevated Ba/Th, Metasomatic Orthopyroxenite, and variably Depleted Indian-Type MORB Mantle in Mafic and Ultramafic Xenoliths from Kharchinsky Volcano, Kamchatka: **M T Siegrist**, G Yogodzinski, M Bizimis, T Churikova

0800h  **T21G-0301 POSTER** Petrogenesis of the Higashi-Akaishi Peridotite Body, Japan: **M R Guild**, C B Till, T Mizukami, S R Wallis

0800h  **T21G-0302 POSTER** Tectonic Control on Slab-derived Sediment Contributions to the Northern Volcanic Zone of Colombia.: **C Errázuriz-Henao**, A Gomez-Tuena, M Weber, M Parolari

0800h  **T21G-0303 POSTER** Compositional variations in lavas of the Klyuchevskaya Volcanic Group (Kamchatka): **B Gordeychik**, T Churikova, G Flerov, G Wörner

0800h  **T21G-0304 POSTER** Effects of Early Cretaceous Plutonism along the Atacama Fault System, northern Chile: The Relationship between Magmatism and Deformation: **N M Seymour**, J S Singleton, R Gomila, D F Stockli

0800h  **T21G-0305 POSTER** Microstructural and Magnetic Characterization of a Syn-Magmatic Shear Zone, Sierra Nevada Batholith, California: **S F Shields**, B Tikoff, C Ostwald, M D Schmitz

0800h  **T21G-0306 POSTER** Reverse-time migration of converted S-wave if density variations included: **S Tong**, C Ming, H W Zhou, L Wang, X Xu

0800h  **T21G-0307 POSTER** In search for the missing arc root of the Southern California Batholith: investigating the P-T-t evolution of upper mantle xenoliths from the Colorado Plateau Transition Zone: **O Rautela**, A D Chapman, J E Shields
Tectonophysics: AGU Fall Meeting 2018

0800h **T21G-0308 POSTER** GEOLOGICAL CONSTRAINTS ON ~30 MILLION YEARS OF DIACRONOUS MAGMATISM ALONG AN ARC-TRANSFORM JUNCTION, WRANGLELL ARC, SOUTHERN ALASKA: J M Trop, M E Brueseke, J Benowitz, P W Layer, K N Davis, B K Morter, S E Berkelhammer, M A Weber

0800h **T21G-0309 POSTER** Geochronological and geochemical evidence of continental crust "relamination" in the origin of intermediate arc magmas: A Gomez-Tuena, J G Cavazos-Tovar, M Parolari, S M Straub, R Espinosa-Pereña

0800h **T21G-0310 POSTER** Bulldozing of Continental Mantle Lithosphere by Flat-Slab Subduction: Implications for Upper Plate Deformation and Arc Magmatism: J van Wijk, G J Axen, C A Currie

0800h **T21G-0311 POSTER** P-T-t-d Paths from Lithospheric Shear Zones During Subduction: Links Between Deformation, Magmatism and Metamorphism: S Seno, M Maino, L Casini, A Langone, F L Schenker

0800h **T21G-0312 POSTER** Construction of Continental Crust in the Southwest Caribbean Sea: a Case Study of the Bay Islands, Honduras: N Kepezhinskas, D A Foster, P Kepezhinskas, G D Kameno

0800h **T21G-0313 POSTER** New Insight on the Rotation and Deep Crustal Structure of Java and the Lesser Sunda Islands Based on Arc Volcano Distribution: H Andikagumi, C Macpherson, K J W McCaffrey

0800h **T21G-0314 POSTER** The Role of Arc Migration in Cordilleran Orogenic Cyclicity: J Chapman

0800h **T21G-0315 POSTER** Subduction Zones Migration Led by Brittle-Viscous Deformation Throughout The Lithosphere: T Gerya, J Munch

0800h **T21G-0316 POSTER** Deciphering the controlling mechanism for Andean mountain building in Central Chile: Preliminary Results: D Comte, M Farías, A P Navarro-Aránguiz, S W Roecker, A Rietbrock

0800h **T21G-0317 POSTER** Subduction Diamonds Twenty Years After: P Kepezhinskas, N Kepezhinskas

0800h **T21G-0318 POSTER** Probing the origins of large calderas in Kamchatka: are short-lived large silicic systems in continental arcs produced by periodic delamination of the lower crust?: D Colon, I N Bindeman, T Gerya

0800h **T21G-0319 POSTER** Fluorine concentrations in geothermal springs as an indicator of rheological weakening promoting active deformation in Western North America: W E Holt, A Bahadori, J Kim, T Rasbury, W Shen, J E Grossman

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V21B (MM) Marquis 6

Tuesday 0800h

**The 2018 Eruptions of Kilauea Volcano, Hawaii, and Fernandina and Sierra Negra Volcanoes, Galápagos Islands** (joint with GH, IN, S, T)

*Presiding: Ingrid Johanson, USGS; Matthew Patrick, USGS; Gregory Waite, Michigan Technological University; Claire Horwell, Durham University;*
DI22A (MM) Archives

Tuesday 1020h

Subducting Slabs in the Mantle II (joint with MR, S, T, V)

Presiding: Karin Sigloch, University of Oxford; Zhongwen Zhan, CalTech Seismological Laboratory; Fanny Garel, Géosciences Montpellier; Sylvie Demouchy, Géosciences Montpellier;

1020h DI22A-01 Constraining small-scale mantle heterogeneities underneath the Pacific Ocean using USArray data: K Leng, J Korenaga

1035h DI22A-02 How surface topography of convergent margins depends on the deep slab geometry and kinematics: insights from numerical modelling.: A Briaud, R Agrusta, C Faccenna, F Funiciello, J Van Hunen

1050h DI22A-03 Inferred Variations in Thermal and Rheological State of the Nazca Slab from High-Resolution Tomographic Imaging: D E Portner, E E Rodriguez, S L Beck, G Zandt, A C Scire, M P Rocha, M Assumpcao

1105h DI22A-04 Seismogenic Zone of Deep Intraslab Earthquakes beneath Japan Constrained by Adjoint Tomography: M Chen, V C Manea, F Niu, S S Wei, E Kiser

1120h DI22A-05 Dynamics of Stagnant Slabs in the Mantle Transition Zone: Y Zhou, Z Guo

1135h DI22A-06 Subduction zone viscosity and plate coupling from trench topography using adjoint inversions with a free-surface model: X Liu, M Gurnis, V Ratnaswamy, G Stadler, J Rudi

1150h DI22A-07 Laboratory Simulation of Deformation of a Subducted Slab in the Mantle Transition Zone: A Mohiuddin, J Girard, S I Karato, C Jain

1205h DI22A-08 Can Lithosphere Sinking at Subduction Zones Provide Constraints on Global Mantle Convection?: E Ficini, M Cuffaro, C Doglioni

G22A (MM) Independence D

Tuesday 1020h

Plate Motion, Continental Deformation, and Interseismic Strain Accumulation I (joint with GP, NH, S, T)

Presiding: Donald Argus, Jet Propulsion Laboratory; Brian Yanites, Indiana University Bloomington; Xiwei Xu, Institute of Crustal Dynamics, China Earthquake Administration; Takashi Azuma, Geological Survey Japan;

1020h G22A-01 Measurements of Interseismic Deformation Using Dense Catalogs of SAR Data: Y A Fialko, E Tymofeyeva

1035h G22A-02 Towards large-scale, InSAR-derived surface velocities and strain rates for the global tectonic belts: J R Weiss, T J Wright, A J Hooper, K Spaans, N Greenall, R J Walters, P J González, Z Li, C Yu, L Shen, B Parsons, J R Elliott, Y Zhou, E Hussain, N Dodds, Q Ou, J D B Dianala

1105h G22A-03 Total variation regularization of geodetically constrained block models in southwestern Taiwan: M H Huang, E L Evans

1135h G22A-04 Active Tectonics, Seismicity, and Surface Processes Interactions in South and East Asia II (joint with EP, NH, S)

Presiding: J Bruce Shyu, National Taiwan University; Brian Yanites, Indiana University Bloomington; Xiwei Xu, Institute of Crustal Dynamics, China Earthquake Administration; Takashi Azuma, Geological Survey Japan;

1205h G22A-08 Are Present-day Deformation and Seismicity in the Alps and the Pyrenees Examples of Super-slow Plate Boundary? Constraints from a New Analysis of GNSS Data.: C Masson, P Vernant, S Mazzotti, J Chery, G Khazaradze, D Erik

T22A (MM) Liberty N-P

Tuesday 1020h

Active Tectonics, Seismicity, and Surface Processes Interactions in South and East Asia II (joint with EP, NH, S)

Presiding: J Bruce Shyu, National Taiwan University; Brian Yanites, Indiana University Bloomington; Xiwei Xu, Institute of Crustal Dynamics, China Earthquake Administration; Takashi Azuma, Geological Survey Japan;

1020h T22A-01 Modeling Strain Rate and Fault Slip for China and Vicinity Using GPS Data: Y Rong, Z K Shen, G Chen, H Magistrale

1035h T22A-02 Finding Northwest-striking Dextral-slipping Faults at the East End of the Altyn Tagh Fault and its Implications to Northeastward Growing of the Tibetan Plateau: S Zhang, R Liu, A Li, C Guo

1105h T22A-03 New constraints on Quaternary slip partitioning near the eastern termination of the Altyn Tagh fault in NW China: N Wieler, A Mushkin, H Zhang, E Shelef, A Sagi, Z Ren, F Huang, J Liu, P Shi
1105h **T22A-04** Apatite fission track data reveal the Mid-Miocene re-activity of the Baigunhu Fault, part of the Altyn Tagh Fault, Tibet: D Liu, P Van Der Beek, M Bernet, H Li, Z Sun, J Pei, J Pan, H Wang

1120h **T22A-05** The Last Surface Rupture Event on the Himalayan Frontal Thrust in Central Nepal near Burwal: K Okumura, P Pokhrel, H Kondo, T Furuhashi, S N Sapkota

1150h **T22A-07** Earthquake Hazard Assessment Along Northern and Eastern Boundaries of the Colliding India Plate from GNSS, LIDAR and Seismicity Data: P Banerjoe

1205h **T22A-08** CRUSTAL STRUCTURE, STRESS FIELD EVOLUTION ACROSS NW HIMALAYA, INDIA FROM A COMBINED SEISMIC AND GRAVITY STUDY: M P Parija, S Kumar, V M Tiwari

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**T22B** (MM) Liberty L

**Tuesday 1020h**

**Volatile Cycling in Subduction Zones: Fluid Inputs, Pathways and Outputs, and Their Impact on Geodynamic Processes and Natural Hazards I**

*Presiding: Stephen Hicks*, University of Southampton; *George Cooper*, University of Durham; *Lidong Bie*, University of Liverpool; *Richard Davy*, Imperial College London;

1020h **T22B-01** The role of subduction velocity in slab dehydration and arc magmatism: V Magni, P Bouilhol, J Van Hunen, M Domeier

1035h **T22B-02** How Slab Depth is Reflected in Aleutian Arc Magmas: D J Rasmussen, T A Plank, D C Roman, E Hauri, H A Janiszewski, E Lev, K P Nicolaysen, P E Izbekov

1050h **T22B-03** Deep mantle metasomatism tracked by in-situ B isotopes: examples of the Alps and the Caribbean: C Martin, K E Flores, S Angiboust, A Vitale Brovarone, G E Harlow

1105h **T22B-04** Relation Between the Nature of the Subducting Plate, Heat Flow and Fluid Escape Structures at the Lesser Antilles Island arc.: F Klingelhoefer, B Marcaillou, M Laurencin, Y Biari, M Laigle, D Graindorge, M Evain, H Kopp, S Lallemand, J F Lebrun, M Paulatto


1135h **T22B-06** Global and Local variations in the hydration of subducting lithospheric mantle: T Garth, A Rietbrock, L Bie

1150h **T22B-07** Mantle Attenuation Related to the Taupo Volcanic Zone, New Zealand: D M Eberhart-Phillips, S C Bannister, M Reyners

1205h **T22B-08** Imaging regional electrical structure in the central Chilean subduction zone (35 – 36° S) near the 2010 Maule earthquake using magnetotellurics: D R Cordell, M J Unsworth, D Diaz, V Reyes

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**T22C** (MM) Liberty M

**Tuesday 1020h**

**Whose Fault Is It? Relating Structural and Compositional Heterogeneity to Slip Behavior I**

*Presiding: Hannah Rabinowitz*, Brown University; *Helen Janiszewski*, Carnegie Institution for Science; *Ake Fagereng*, Cardiff University; *Samer Naif*, Lamont-Doherty Earth Observatory;

1020h **T22C-01** Interactions between roughness, wear, normal stress and fault friction during simulated faulting in limestone: C Harbord, S Nielsen, N De Paola, R Holdsworth

1035h **T22C-02** The influence of fault damage and fluids on seismic behavior during slip on laboratory faults: T Goebel, M Bohnhoff, E E Brodsky, G H Dresen

1050h **T22C-03** An experimental approach to investigate the link between semi-brittle rheology and slip dynamics: J E Reber

1105h **T22C-04** The role of strike-slip fault geometry and damage on segmented fault slip: E Madden, M L Cooke, H M Savage

1120h **T22C-05** Structural Control on Earthquake Initiation and Slip Distribution, Revealed by High-Resolution Seismic Imaging of Fault Zones: H Zhang, H Guo, Y Liu, X Zhang


1150h **T22C-07** Chemical reactions trigger fluid overpressure and shear failure in plate boundary-scale serpentinite shear zones: M Tarling, S A F Smith, J Scott

1205h **T22C-08** Rheology of the Down dip Extent of a Subduction Megathrust: Underplating History and the Role of Serpentine in the Condrey Mountain Schist, Northern California: C M Tewksbury-Christle, W M Behr, M A Helper
**Tuesday P.M.**

**DI23A (MM) Archives**

**Tuesday  1340h**

**Advances in Computational Geosciences I (joint with C, GP, S)**

*Presiding: Juliane Dannberg*, University of California Davis; *Marc Spiegelman*, Columbia University; *Jed Brown*, University of Colorado at Boulder; *Dave May*, University of Oxford;

1340h **DI23A-01** Sensitivity kernels for geodynamic surface observables based on adjoint methods: J Austermann, D Al-Attar, W Bangerth, M Hoggard

1355h **DI23A-02** CitcomSVE: A massively parallelized finite element software package for modeling elastic and viscoelastic deformation on regional and global scales: S Zhong

1410h **DI23A-03** Towards efficient iterative matrix-free solvers: L Räss, Y Podladchikov, T Duretz

1425h **DI23A-04** Nonlinear Constitutive Laws for Fault Dynamics: M Knepley, B Aagaard, C A Williams Jr

1440h **DI23A-05** Pythonic Parallel Implementation of 3D Lattice Boltzmann Method for Geophysical and Geological Applications: G Morra, P R Mora, D A Yuen

1455h **DI23A-06** Highly scalable adaptive mesh refinement for natural hazards modeling: D Calhoun, C Burstedde

1510h **DI23A-07** A Scalable River Network Simulator for Extreme Scale Computers using the PETSc Library: G Betrie, H Zhang, B F Smith, E Yan

1525h **DI23A-08** Multi-Scale Storm Surge Prediction for High-Resolution Forecasts and Climate Scenarios: K T Mandli, J Li, H Qureshi, A Schwarzschuld

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**DI23B (CC) Hall A-C (Poster Hall)**

**Tuesday  1340h**

**Subducting Slabs in the Mantle III Posters** (joint with MR, S, T, V)

*Presiding: Karin Sigloch*, University of Oxford; *Zhongwen Zhan*, CalTech Seismological Laboratory; *Fanny Garel*, Géosciences Montpellier; *Sylvie Demouchy*, Géosciences Montpellier;

1340h **DI23B-0029** *POSTER* Global subduction dynamics: links between slab dip angles, dynamic pressure, and lower mantle mass flux: A Holt, L Royden


1340h **DI23B-0031** *POSTER* Anisotropy in the lowermost mantle beneath the Indian Ocean Geoid Low: Insights from ScS splitting measurements: P R Bommoju, R Kumar

1340h **DI23B-0032** *POSTER* Constrain the fine-scale velocity structure with numerical modeling of high-frequency guided waves in the eastern Alaskan subduction zone: X Guan, Y Zhou, T Furumura

1340h **DI23B-0033** *POSTER* Evidence for a Lithospheric Fragment Beneath Klyuchevskoy Volcano From Seismic Data of Local and Teleseismic Earthquakes: J R Bourke, A Nikulin, J J Park, V L Levin

1340h **DI23B-0034** *POSTER* 2-D Inversion of USArray Megnetotelluric Data from Western North-America: M A Shehata, H Mizunaga

1340h **DI23B-0035** *POSTER* Different uplifts of the 410 km discontinuity caused by cold subducted slabs beneath the Hindu Kush-Pamir region: Q Cui, Y Zhou, R Wei, G Li, W Li

1340h **DI23B-0036** *POSTER* Low Velocity Layer above the 410-km Discontinuity beneath Northwest Pacific Subduction Zone and its Dynamic Implication: J Li, G Han, G Guo, Q Chen

1340h **DI23B-0037** *POSTER* Mantle heterogeneity across the Andean subduction zone from finite-frequency teleseismic S-wave tomography: E E Rodriguez, D E Portner, S L Beck, M P Rocha, M Assumpcao

1340h **DI23B-0038** *POSTER* Slab strength and trench length influence lowermost mantle flow directions: J Zhang, A K McNamara

1340h **DI23B-0039** *POSTER* Subducting slab and mantle transition zone interaction: mode selection and deep water recycling: Z H Li

1340h **DI23B-0040** *POSTER* Can a subducted sedimentary layer survive into the deep mantle? Maybe, if it is strong or thin.: J Muller, J Schools, K Chotaiia, E C Weidner, J Adams, M I Billen, L N Moresi, M S Miller, L W aszek, T W Becker, C R Lithgow-Bertelloni, L P Stixrude, D Weis

1340h **DI23B-0041** *POSTER* Eikonal equation-based teleseismic traveltime tomography of Sumatra: S Shaolin, P Tong, S Suardi

1340h **DI23B-0042** *POSTER* Magnitude of the Buoyancy Forces Associated with the 410- and 660-km Discontinuities as a Function of Slab Dip Angle: S M Campbell, R Moucha
1340h DI23B-0043 POSTER New insights on the role of olivine dislocation creep rheology in subduction dynamics models: F Garel, C Thoraval, S A Demouchy, A Tommasi, K Gouriet, P Cordier, P Carrez, R Davies

1340h DI23B-0044 POSTER Numerical simulation of thermal structure in the southern subduction zone of the Chile Triple Junction: J Xu, Z Wang, S Wang, D Wei

1340h DI23B-0045 POSTER Slab geometry in double inward dipping subduction: T Lyu, Z Zhu, B Wu

1340h DI23B-0046 POSTER The effect of multiple subducting slabs on edge-driven convection: Implications for the origin of Jeju Island, Korea: D Kim, B D So

1340h DI23B-0047 POSTER Two-dimensional finite element modeling of slab detachment using Arbitrary Lagrangian-Eulerian method: The physical possibility of slab tear beneath the East Sea (Japan Sea): S H Lee, B D So

1340h DI23B-0048 POSTER The cause of slab stagnation in mantle transition zone and its effects on the dynamics of the mantle: W Mao, S Zhong

1340h DI23B-0049 POSTER Mantle melting and intraplate volcanism due to upwellings from the stagnant slab: X Long, M Ballmer, A Manjón-Cabeza Córdoba

1340h DI23B-0050 POSTER Deep slab flattening and temporary stagnation within the lower mantle transition zone: A G Grima, C R Lithgow-Bertelloni, F Cramer

G23C (CC) Hall A-C (Poster Hall)

Tuesday 1340h

Plate Motion, Continental Deformation, and Interseismic Strain Accumulation II Posters 🌍 (joint with GP, NH, S, T)

Presiding: Donald Argus, Jet Propulsion Laboratory; Jeff Freymueller, University of Alaska Fairbanks; Rui Fernandes, University of Beira Interior; D. Sarah Stamps, Virginia Tech;

1340h G23C-0606 POSTER Estimation of continental scale vertical crustal velocities using GPS and GRACE: N Lau, A A Borsa, T W Becker

1340h G23C-0607 POSTER Towards Open Access GNSS/GPS Velocity Solutions at UNAVCO: S Malloy, C M Puskas, M Stoica, D S Stamps, D Phillips, S D Peckham

1340h G23C-0608 POSTER Towards a Better Understanding of Inter-seismic Deformation in the Mentawai Seismic Gap by Establishing a Denser GPS Network in West Sumatra: A M Lubis, R Sahputra, I Hermawan, L K Comfort

1340h G23C-0610 POSTER Retrievint North-South Dextral Shear with SAR Azimuth Offsets: The West-Lut Fault in Eastern Iran: P Piromthong, A J Hooper, J R Elliott

1340h G23C-0611 POSTER Present Day Interseismic Slip Rates of the Xianshuihe Fault Observed by InSAR: Y Li, R Burgmann

1340h G23C-0612 POSTER Can GNSS be a sensing tool for spatial-temporal pattern of surface deformation? A case study in China: X Zhou, Y Yang, W Jiang, H Chen

1340h G23C-0613 POSTER Present-Day Velocity Field of Mongolia based on GNSS solutions: S Mijiddorj, M S Bos, R M S Fernandes

1340h G23C-0614 POSTER Modeling the spatial and temporal evolution of normal faulting earthquakes in the upper plate of the Japan subduction zone after the 2011 Tohoku earthquake: M W Herman, R M A Govers

1340h G23C-0615 POSTER Stress Diffusion from Repeating Back-arc Rifting and Secular Uplift of an Island Arc: Okinawa Trough and Southwestern Ryukyu Arc: Y Iwasa, K Heki

1340h G23C-0616 POSTER Mechanical coupling of active faults implied by time-dependent crustal deformation around the northern Itoigawa-Shizuoka Tectonic Line fault system, central Japan: K Kumagai, T Sagiya, A D V Meneses Gutierrez, X Zhang, N Matsuta, D Hirouchi, K Matsushiro, T Okuda

1340h G23C-0617 POSTER Analysis of the 2018 Mw 7.5 Papua New Guinea earthquake using the sub-pixel offset method: J H Chong, M H Huang


1340h G23C-0619 POSTER Characterizing Deformation Along an Early-Stage Rift: GPS Observations from the Northern Lake Malawi (Nyasa) Rift: G Bonnette, J Elliott, Z Molitor, M E Pritchard, S L Nooner, C Ebinger, E Saria, D Ntambila, P R N Chindandali, G J Mbogoni, C Andronics

1340h G23C-0620 POSTER Intra-continental deformation in central-western Europe: insights from geodetic study: L Tunini, E Calais

1340h G23C-0621 POSTER Have we seen the largest earthquakes in eastern North America?: J Neely, M Merino, S Stein, J Adams

1340h G23C-0622 POSTER Tectonic strain accumulation and release in California from 20+ years of continuous GNSS displacement observations with respect to a dynamic datum and consideration of transient deformation: E Klein, Y Bock
1340h **G23C-0623 POSTER** Earthquake-cycle Deformation on Northern Vancouver Island and Haida Gwaii: Y Jiang, L J Leonard, J A Hentont, R D Hyndman, H Luo, L Nyoqoalishen, K Wang

1340h **G23C-0624 POSTER** Crustal Velocity Field and Kinematic Models for Central Costa Rica: L A Carvajal Soto, T Ito, H Kimura, M Protti

1340h **G23C-0625 POSTER** Revisiting the Theory of Intraplate Tectonics: Case Study of the South American Plate: L S M Campbell, S Wodowski

1340h **G23C-0626 POSTER** Quantifying Rigidity of the Puerto Rico-Virgin Islands Block Using Two Decades of GPS Observations: M M Solares, A M Lopez, G S Mattioli, P E Jansma

1340h **G23C-0627 POSTER** Assessment of South America Mid-Plate Strain Rates through GNSS Velocities Estimated from SIRGAS-C Time Series: H A Marques, M Assumpcao, A L Padilha, M Banik de Padua


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**GP23A (MM) Independence A-C**

**Tuesday 1340h**

**Motion Between Hot Spots and True Polar Wander I** (joint with Di, G, T)

*Presiding: Richard Gordon, Rice University; Paul Wessel, Univ Hawaii; Joann Stock, Caltech; Jason Phipps Morgan, Royal Holloway University of London;*

1340h **GP23A-01** Hotspot and LLSVP Motion: J A Tarduno, R Bono

1355h **GP23A-02** Determining Relative Mantle Plume Motion Using Hotspot Track Geometry, Geochronology and Geochemistry: K Konrad, A Koppers, B M Steinberger, V Finlayson, J G Konter, M G Jackson

1410h **GP23A-03** Absolute Plate and Plume Motions and Implications for True Polar Wander: P Wessel, C P Conrad

1425h **GP23A-04** Apparent Polar Wander of the Pacific Plate Over the Past 80 Ma: Implications for Motion Between Hotspots, Origin of the Hawaiian-Emperor Bend, True Polar Wander, and Global Climate Change: R G Gordon, D Woodworth, L Seidman

1440h **GP23A-05** Lateral motion of mantle plumes in 3D geodynamic models: M Li, S Zhong

1455h **GP23A-06** A rapid burst in hotspot motion through the interaction of tectonics and deep mantle flow: M Gurnis, R Hassan, D Müller, S Williams, N E Flament

1510h **GP23A-07** A high-fidelity 165 Ma paleomagnetic pole from Northern Chile with implications for Late Jurassic true polar wander: R R Fu, D V Kent, J R Creveling, S R Hemming

1525h **GP23A-08** Record of the Late Jurassic true polar wander from the Northern Apennines (Italy): S Satoli, J Besse

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**S23A (CC) Hall A-C (Poster Hall)**

**Tuesday 1340h**

**Induced Seismicity in the United States and Canada Posters** (joint with H, NG, T)

*Presiding: Cornelius Langenbruch, Stanford University; Carsten Dinske, Freie Universität Berlin; Ruijia Wang, University of Alberta; Matthew Weingarten, Stanford University;*

1340h **S23A-0493 POSTER** Aftershock density decay in space and time: Observations for Oklahoma and implications: Z D Rosson, J I Walter, T Goebel, X Chen

1340h **S23A-0494 POSTER** Tracking Thousands of Microearthquakes for a Month in Northern Oklahoma: What a Large-N Array Can Reveal About Induced Seismicity: S L Dougherty, E S Cochran, R M Harrington, Z E Ross

1340h **S23A-0495 POSTER** Constraining Geological Structures and Temporal Variations in Fluid Accumulation near Hydraulic Fracturing Injection Sites in the Western Canada Sedimentary Basin: M P Roth, R M Harrington, Y Liu

1340h **S23A-0496 POSTER** Interplay between pore pressure and poroelastic stress induces US midcontinent seismicity: E Ansari, T S Biddioli, A Hollenbach, K Nolte

1340h **S23A-0497 POSTER** Hydraulic Fracturing Operations for Oil and Gas production: Increasing Earthquake activities and Methane Emissions across the United States: R P Singh, V Villa

1340h **S23A-0498 POSTER** Low Seismicity in the Midland Basin and Implications for Induced Earthquakes: A Li, H Jing, H W Zhou

1340h **S23A-0499 POSTER** An Investigation of Seismicity Induced by Hydraulic Fracturing in the Sichuan Basin of China based on Data from a Temporary Seismic Network: L Meng, A McGarr, L Zhou, Y Zang
S23B (CC) Hall A-C (Poster Hall)

Tuesday 1340h

The 15 November 2017 Pohang Earthquake Posters

Presiding: Kwang-Hee Kim, Pusan National University; Antonio Pio Rinaldi, ETH Zurich; Stefan Wiemer, ETH Zurich; Jin-Han Ree, Korea University;

1340h S23B-0513 POSTER The 15 November 2017 Pohang Earthquake: K H Kim, J H Ree, Y Kim, S Kim, S Y Kang, W Seo

1340h S23B-0514 POSTER The November 15, 2017, Pohang earthquake: A potential anthropogenic event of Mw 5.5 in South Korea: F Grigoli, A P Rinaldi, S Cesca, A Manconi, J A Lopez-Comino, J F Clinton, R W Westaway, C Cauzzi, T Dahm, S Wiemer

1340h S23B-0515 POSTER Reasons to doubt the 15 November 2017 Pohang, South Korea, earthquakes were induced: A McGarr, A J Barbour, E L Majer

1340h S23B-0516 POSTER A different view on the occurrence of the 2017 M5.4 Pohang earthquake: T K Hong, J Lee, S Park, W Kim

1340h S23B-0517 POSTER Investigation by the South Korean government on the relations between the 2017 Pohang earthquakes and nearby Enhanced Geothermal System (EGS): K K Lee

1340h S23B-0518 POSTER Combining geomechanical modeling with physics-based seismicity models to assess the trigger probabilities of the Mw 5.5 2017 Pohang earthquake: T Dahm, S Hainzl, H Hofmann, S Cesca, G Zimmermann, E Huenges

1340h S23B-0519 POSTER Proxies for the 2017 Pohang Earthquake Fault and Modelling of Fluid Flow: J H Ree, J H Kim, C Park, C M Kim, R Han, T Shimamoto, H C Kang

1340h S23B-0520 POSTER Rupture Propagation and Segmentation of the 2017 Pohang Earthquake: J H Ree, K H Kim, S Kim, Y Kim, H Lim

1340h S23B-0521 POSTER Spatiotemporal Variations of the Reactivated Fault Revealed by High-Precision Aftershock Locations of the 15 November 2017 Pohang Earthquake: S Y Kang, K H Kim, J HAN, W Seo, J H Ree

1340h S23B-0522 POSTER 2017 Mw 5.4 Pohang earthquake, South Korea and poroelastic stress change associated with fluid injection: H Lim, K Deng, Y Kim, J H Ree, T R A Song
1340h **S23B-0523 POSTER** Towards Modeling the Seismic Velocity Structure of the Pohang Enhanced Geothermal System Site in Korea: **E Kim**, Y Kim, J H Ree, D Mainprice, H Lim

1340h **S23B-0524 POSTER** Characteristics of soft sediment deformation structures generated by the 2017 Mw 5.4 Pohang earthquake: **K Ko**

1340h **S23B-0525 POSTER** Structural, Mechanical and Hydraulic Properties of Fault Zones in the Yeongdeok Pluton (Proxies for 2017 Pohang Earthquake Fault): **C Park**, J H Kim, C M Kim, S Woo, R Han, J H Ree, T Shimamoto, H C Kang

1340h **S23B-0526 POSTER** Surface deformation related to the 2017 Pohang earthquake: **J H Choi**, K Ko, Y S Gihm, C Cho, H Lee, E Bang, H Lee, H K Bae, S W Kim, S J Choi, S S Lee, S R Lee

1340h **S23B-0527 POSTER** Optimization of PRESTo Early Warning System for South-Eastern Korea: **A Emolo**, M Caccavale, C Alessandro, L Elia, J H Park, I S Lim, Y J Seong

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**POSTERS**

**T23A (CC) Hall A-C (Poster Hall)**

**Tuesday  1340h**

**Active Tectonics, Seismicity, and Surface Processes Interactions in South and East Asia V Posters** (joint with EP, NH, S)

**Presiding:** J Bruce Shyu, National Taiwan University; Brian Yanites, Indiana University Bloomington; Xiwei Xu, Institute of Crustal Dynamics, China Earthquake Administration; Takashi Azuma, Geological Survey Japan;

1340h **T23A-0320 POSTER** Evaluation of surface-rupturing fault width by statistical analysis from the 2016 Kumamoto, Japan, earthquake: Implications in regulating fault avoidance zone: **A Konno**, S Toda

1340h **T23A-0321 POSTER** Geomorphological and geological characteristics of triggered surface faults associated with 2016 Kumamoto Earthquake sequence around the southwest of the western part of the Aso caldera, southwestern Japan: **T Nakano**, H UNE, H P Sato, K Komura, H Yagi

1340h **T23A-0322 POSTER** Surface rupture of normal-faulting earthquake occurred in a short 5-year recurrence interval at southern Abukuma region, northeast Japan: **K Komura**, K Aiyama, T Nagata, A Yamada, H P Sato, Y Aoyagi

1340h **T23A-0323 POSTER** Estimation of basement depth from coastal to offshore areas in western Noto Peninsula, central Japan, by integrating acoustic explorations and gravity anomaly: **A Sawada**, Y Hiramatsu


1340h **T23A-0325 POSTER** Building damage patterns depending on faulting types and seismic waves induced from medium scale earthquake damages: **Y S Kim**, J H Choi, S Naik, K Jin, T Kim, J Lee

1340h **T23A-0326 POSTER** Deformation history based on the characteristics of dike-controlled faults and cross-cutting relationship between dikes and faults: **J Lee**, Y S Kim

1340h **T23A-0327 POSTER** Tectonic features of the Hualien Ridge and its relationship to the 2018 M6.4 Hualien earthquake: **L K Lin**, S K Hsu, C H Tsai, S S Lin

1340h **T23A-0328 POSTER** A 3D Vp crustal structure of the northern Longitudinal Valley, Taiwan, from a dense seismic array after the 2018 Mw6.4 Hualien earthquake: **W F Sun**, H Kuo-Chen, Z K Guan, P Y Jhong, W Y Chang

1340h **T23A-0329 POSTER** Near-Field Rotational Ground Motions Observed during the 2018 M6.2 Hualien (Taiwan) Earthquake Sequence: **C S Ku**, B S Huang, C J Lin, H C Chiu, C C Liu, W G Huang, Y M Wu

1340h **T23A-0330 POSTER** Reassess Coseismic and Postseismic Slip on Triggered Shallow Slip of 2016 Mw 6.4 Meinong Earthquake by High-rate CGPS, Campaign GPS, InSAR and Strong Motion Observation: **J C Hu**, Y H Yang, H Tung, M C Tsai

1340h **T23A-0331 POSTER** Applications on the earthquake hazard estimate by using the 3D fault plane model, a study on 2018 Hualien earthquake, Taiwan: **Y K Lin**, M C Ke, S S Ke

1340h **T23A-0332 POSTER** The Temporal Variation of Three Dimensional Attenuation Structure of 2016 Meinong Earthquake,Taiwan: **J Y WU**, S Wen

1340h **T23A-0333 POSTER** Coseismic and Postseismic Deformation of the 2016 Meinong Earthquake, Southwestern Taiwan: **J C Lee**, Y N N Lin, K H Tseng, S Barbot, C P Chang

1340h **T23A-0334 POSTER** Shallow Subsurface Structure Beneath the Northern Part of the Longitudinal Valley in Eastern Taiwan Using the High-Frequency Receiver Function Technique from Dense Seismic Array: **C K Su**, L Che-Min, H Kuo-Chen
Earthquakes?: Control the Spatiotemporal Patterns of Intraplate Earthquakes?:

Kiram: correlation analysis of seismic ambient noise: discontinuity beneath Central Indonesia by the cross-Hall

Indonesia: A Reconstruction from 12-0 My: Lee

Island, Philippines: magmatic chronology and arc-C S Ku, B S Huang, K Porahoa, T Toba, C Roga

Collected GPS Observation Data:

Solomon Islands: A Reevaluation Based on Newly

Megathrust Coupling along the Subduction Zone in Hsu, S W dowinski

southern Taiwan:

lithology, structure, and channel morphology: bedrock rivers in Taiwan reveal connections between LiDAR DEMs:

episodic heavy rainfall events as revealed by multi-period M Hashimoto, J C Hu, M C Tsai

Dense GNSS Data in Southwest Taiwan:

Relative Motions Inferred from a Cluster Analysis of Guo, J C Lee, T B Byrne, J C Lewis, C H Tsai

Central Range of Taiwan and Its Tectonic Implications:

Fold and Sub-Horizontal Foliation in the Eastern H Yang

Taiwan Orogen:

Lithology and Uplift in the Coastal Range of Eastern H Yang

Coastal Range, Taiwan:

development constraints on a creeping fault on the L S H Lai, J J Roering, R J Dorsey, J Y Yen

How Do Fault Interactions

Depth estimation of Moho discontinuity beneath Central Indonesia by the cross-correlation analysis of seismic ambient noise: M R B Kiraman, G Toyokuni, T Okada

T23A-0346 POSTER How Do Fault Interactions Control the Spatiotemporal Patterns of Intraplate Earthquakes?: G Luo, M Liu, Y Sun

T23B (CC) Hall A-C (Poster Hall)

Tuesday 1340h

Active Tectonics, Seismicity, and Surface Processes Interactions in South and East Asia VI Poster (joint with EP, NH, S)

Presiding: J Bruce Shyu, National Taiwan University; Brian Yanites, Indiana University Bloomington; Xiwei Xu, Institute of Crustal Dynamics, China Earthquake Administration; Takashi Azuma, Geological Survey Japan;

T23B-0348 POSTER Viscoelastic Behavior of the Longmenshan Fault Zone Constrained by Postseismic Deformation of the 2013 Lushan Earthquake: Q Wang, X Xu, Z Jiang

T23B-0349 POSTER Late Cenozoic structural deformation and evolution of the Longmen Shan fold-and-thrust belt: Insights from numerical simulations: H Zhang, Z Zhang, L Wang, H Cheng, Y Shi

T23B-0350 POSTER Analyzing Lithologic and Tectonic Controls on Erosion Rates in the Min Shan Region of Eastern Tibet: H Kirkpatrick, S Moon

T23B-0351 POSTER Relationship between the temperature abnormal changes of Maoya hot spring water and earthquakes in Sichuan-Yunnan area: B Zhang

T23B-0352 POSTER The brittle-ductile transition layer of a new fault revealed by focal depth of the Yunnan Jinggu Mw6.1 earthquake: S Wang, S Ni, X Zeng, X Wang, Q Wang


T23B-0354 POSTER Investigation on the Buried Seismogenic Faults in Southeastern China: A Zhu, P Wang, F Liu

T23B-0355 POSTER Characteristics of Late Quaternary activity along the Red River fault, southwestern China: Z Lin, H Kaneda, Y Matsuishi

T23B-0356 POSTER Paleoseismologic investigation revealed early events occurred along north Altyn Tagh fault near Shibaoceng, Gansu, China: M Gao, Y Klinger, P Tapponnier, X Xu, J van der Woerd

T23B-0357 POSTER Seismic slip distribution and rupture model of the Lenglongling fault zone, northeastern Tibetan Plateau: W Jiang, Z Han, J Zhang, Q Jiao, Y Li
1340h **T23B-0358 POSTER** Seismicity in northeastern Tibetan Plateau: Insights from a geodynamic model, seismic catalog analysis, and GPS velocity field: **Y Sun, G Luo**

1340h **T23B-0359 POSTER** Styles and rates of active faulting in northeastern corner of the Tibet Plateau: **C Li, P Z Zhang, X Li, D Yuan**

1340h **T23B-0360 POSTER** Northern Tibet Lithosphere Rheology Structure Inferred from Postseismic Deformation Modeling of the 2001 Mw 7.8 Kokoxili, China Earthquake: **M Li, P He, J Sun, Z Shen**

1340h **T23B-0361 POSTER** Stable rate of slip along the Karakax Valley Fault from observation of inter-glacial and post-glacial offset morphology and surface dating: **G Peltzer, J van der Woerd, A S B Meriaux, N Brown, E Rhodes, F J Ryerson, J Hollingsworth**

1340h **T23B-0362 POSTER** Segmentation Features of the Kalpintage Fault in Front of the Kalpin Nappe Structure Base on the Paleoequakes Rupture And the Geomorphic Response, SW Tianshan: **A Li, Y Ran, H LIU, L Xu**

1340h **T23B-0363 POSTER** Postseismic Effects of the Mw 8.6 Chayu Earthquake (15 Aug 1950) Revealed by GPS Measurements: **S Liang, W Gan, F Tang**

1340h **T23B-0365 POSTER** The current movement characters of main faults surrounding the Eastern Himalayan Syntaxis: **T Fangtou, Y Huichuan, W Xiaonan**

1340h **T23B-0366 POSTER** 3-D Seismic Tomography of the Indo-Asian Collision Zone from Pamir-Hindu Kush in the West to Indo-Burma Ranges in the East: Geodynamic Implications: **J Raooof, S Mukhopadhyay, J N Malik**

1340h **T23B-0367 POSTER** Paleoseismic evidence of a major earthquake event during AD 1400-1500 along the Pinjore Garden Fault (PGF) and Jhajra Fault (JF): Hinterland faults in Northwest Himalaya: **S Arora, J N Malik, S S Sahoo**

1340h **T23B-0368 POSTER** AVERAGE CRUSTAL THICKNESS AND POISSON’S RATIO BENEATH A BROADBAND SEISMOLOGICAL PROFILE ALONG THE KALI RIVER VALLEY, KUMAON HIMALAYA: **S Hajora, D Hazarika, M Bankhwal, N Kumar, S K Pal, P N Singha Roy**

1340h **T23B-0369 POSTER** IMAGING THE LITHOSPHERIC STRUCTURE ACROSS NW HIMALAYA, INDIA UTILIZING LOCAL SEISMIC TOMOGRAPHY: **S Biswal, S Kumar, W K Mohanty**

1340h **T23B-0370 POSTER** Shortening, uplift rate and kinematic evolution of Surin Mastgarh Anticline, Jammu and Kashmir, India: Evidences from field, tectonic geomorphology and magnetic fabric studies.: **A Anilkumar, R Jayangondaperumal**

1340h **T23B-0371 POSTER** Evidence of underplating below Delhi Fold Belt using gravity data: **A Chamoli, D Dwivedi**

1340h **T23B-0372 POSTER** Regional Variation of Coda Wave Attenuation in North-East India and its Implications: **R Das, S Mukhopadhyay**

1340h **T23B-0373 POSTER** Can Dip Reversal Happen Along a Major Fault? - A Magnetotelluric Study in Kachchh, Western India: **K Mohan, P Chaudhary, P Patel, S Chopra**

1340h **T23B-0374 POSTER** Evidence of upper mantle seismic anisotropy beneath the Kachchh rift zone, Gujarat, India.: **B Singh**

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**T23C** (CC) Hall A-C (Poster Hall)

**Tuesday 1340h**

**Coupled tectonic and depositional systems in the Eastern Himalaya, Bengal Basin and Fan Posters (joint with EP, NH, PP)**

**Presiding:** Paul Betka, Lamont -Doherty Earth Observatory; **Ryan Sincavage**, Radford University; **Céline Grall**, Lamont -Doherty Earth Observatory; **Elizabeth Chamberlain**, Vanderbilt University;

1340h **T23C-0375 POSTER** Late Pleistocene Growth of the Sylhet Foredeep from a Tilted Erosional Surface Flanking Outer Anticlines of the Indo-Burma Fold-Belt: **L Seeber, C M McHugh, P M Betka, M S Steckler, C Grall**

1340h **T23C-0377 POSTER** New geologic map, cross sections, and structural models of the Indo-Burman accretionary prism.: **P M Betka, L Seeber, S N Thomson, R Sincavage, M S Steckler, C Zoramthara, V K Gahalaut**

1340h **T23C-0378 POSTER** Out of sequence thrusting in the northern Indo-Burma Ranges: evidence from preliminary zircon (U-Th)/He thermochronology: **P J Haproff, M Odium, A Yin, A V Zuza, D F Stockli**

1340h **T23C-0379 POSTER** Sinuous track of the flexural bulge in the eastern Himalayas and Bengal Basin from multiple loads on a variable rigidity plate, an explanation for the Barind and Madhupur Pleistocene uplands: **M S Steckler, C Grall, J L Grimaud, L Seeber, P M Betka, S H Akhter, D Grandorge, L L Lavier**
1340h T23C-0380 POSTER Clastic Dikes as a Possible Paleo-Earthquake Indicator in the Bengal Basin: E L Chamberlain, S L Goodbred Jr, R L Bain, T Reimann, M S Steckler, C von Hagke, J Wallinga


1340h T23C-0382 POSTER The exhumation of the Indo-Burman Ranges, Myanmar. : Y Najman, E R Sobel, I Millar, D F Stockli, G Govin, E Garzanti, S Ando, G Vezzoli, F Lisker, E Szymanski

1340h T23C-0383 POSTER Downstream evolution of the thermochronologic age signal in the Brahmaputra catchment (eastern Himalaya): Implications for the detrital record of erosion.: P Van Der Beek, L Gemignani, Y Najman, M Bernet, J Braun, E Garzanti, J R Wijbrans

1340h T23C-0384 POSTER Detrital heavy mineral record in the Bengal Fan constrains the evolution of the Himalaya and the linkage of the Ganga and Brahmaputra Rivers: K Yoshida, J W Cruz, A Osaki, A Masuda, M C Manoj, C France-Lanord


1340h T23C-0386 POSTER Fingerprints of Climate Change in the Detrital-Zircon U-Pb Record of the Deep-Sea Bengal Fan?: M D Blum, K G Rogers, J D Gleason, Y Najman


1340h T23C-0389 POSTER Himalayan erosion and Ganga-Brahmaputra sediment delivery recorded in the Bengal fan from IODP Expedition 354: C France-Lanord, A Galy, P Huyghe, K Yoshida, V Spiess
1340h T23D-0400 POSTER Recovery process of temperature profile in a scientific-drilling borehole from a disturbed state caused by drilling mud circulation: W Lin, T Sugimoto, K Sado, X Yang, S Shibutani, N Kamiya, Y Kayamoto, Y Hidata, A Lin

1340h T23D-0401 POSTER Towards understanding the direct dating of co-seismic fault slip events: M Miyawaki, J I Uchida

1340h T23D-0402 POSTER Estimation of horizontal displacement by 3D-trench investigation on the northern part of the Yangsan fault at Dangdedi Oceanic Crust in the South Atlantic from 0-70 Ma: J D Estep, R Reece, D A Kardell, G L Christeson, R L Carlson

1340h T23D-0403 POSTER Detecting a buried active fault by multidisciplinary investigations of geology, geomorphology, remote-sensing and geophysics: A case study from the Yangsan fault, SE Korea: S H Jeong, S Naik, T K Rockwell, Y S Kim

1340h T23D-0404 POSTER ASR compliance ratio measurement for determination of stress state in claystone: S Nagata, W Lin

1340h T23D-0405 POSTER Development of Thermal Property Measurement Procedure of Cuttings by the Transient Plane Source Technique: N Miura, W Lin, O Tadai, X Yang, T Sugimoto, Y Hamada, T Hirose

1340h T23D-0406 POSTER Microstructural Character of Active Fault Zones, Southwest Honshu, Japan: J C White, A Lin

1340h T23D-0407 POSTER LUMINESCENCE AND ESR DATING OF FAULT GOUGE MATERIALS FROM THE NOJIMA FAULT -JAPAN: M Kazantzaki, E Tsakalos, A Lin, T Nishiwaki

1340h T23D-0408 POSTER Optical dating of paleoearthquakes of the Ms7.4 1985 Wuqia earthquake surface ruptures along the Pamir Front Thrust: Y Huili, J Chen, T Li, W Li, X Weipeng Sr

1340h T23E-0410 POSTER Tomographic study of oceanic lithosphere from 0 to 25 Ma in the Equatorial Atlantic Ocean using wide angle OBS data: V A Vaddineni, S C Singh, I Grevemeyer

1340h T23E-0411 POSTER Seismic structure and evolution of upper oceanic crust in the Equatorial Atlantic from 0-75 Ma on the African plate: P Audhkhasi, H Jian, S C Singh

1340h T23E-0412 POSTER Seismic Layer 2A: Constraints and Controls on the Evolution of the Porous Upper Oceanic Crust in the South Atlantic from 0-70 Ma: J D Estep, R Reece, D A Kardell, G L Christeson, R L Carlson

1340h T23E-0413 POSTER Imaging the crust and mantle beneath the equatorial Mid-Atlantic Ridge using the PILAB experiment: C Rychert, N Harmon, J M Kendall, S Tharimena, M R Agius

1340h T23E-0414 POSTER Earthquake Processes along Oceanic Transform Faults and Ridge Segments: OBS Observations along the Chain Fracture Zone in the Mid-Atlantic from the PI-LAB Experiment: D Schlaphorst, S P Hicks, C Rychert, N Harmon, J M Kendall, P Bogiatzis, S Tharimena, M R Agius, R E Abercrombie

1340h T23E-0415 POSTER Radially Anisotropic Shear Velocity Model of the Indian Ocean Upper Mantle: K E Godfrey, C A Dalton

1340h T23E-0416 POSTER The nature and origin of the 85°E Ridge at 2°N. A hotspot track?: T Altenbernd, W H Geissler, W Jokat

1340h T23E-0417 POSTER The structure of the oceanic Moho discontinuity on the Northeast Hawaiian Arc imaged by Pre-Stack Depth Migration of active-source seismic data: N Nakrong, G F Moore, M Yamashita, A Ohira, S Kodaira

1340h T23E-0418 POSTER Lateral heterogeneity of the upper oceanic lithosphere surrounding Hawaii: A K Doran, G Laske

1340h T23E-0419 POSTER In situ rheology of the oceanic lithosphere along the Hawaiian Ridge: G Ito, A Pleus, P Wessel, L N Frazer

1340h T23E-0420 POSTER Seismic structure of Triassic oceanic and stretched continental lithosphere in the eastern Mediterranean from surface wave tomography: A M M E El-Sharkawy, A Dannowski, T M Meier, C Huebscher, S Lebedev, H Kopp

1340h T23E-0421 POSTER MORB modified by melt-peridotite interaction at crust-mantle boundary: An experimental perspective: J Koepke, C Zhang, O Namur
1340h **T23E-0422 POSTER** A multi-stage history of refertilization and melt-impregnation in peridotites from the Santa Elena Ophiolite, NW Costa Rica: **D Carr**, M P Loocke, J E Snow, E Gazel


1340h **T23E-0424 POSTER** Lateral melt corner flow in the lower ocean crust: **J E Snow**, A Sanfilippo, Y Ohara

1340h **T23E-0425 POSTER** Lithospheric Structure of the Juan de Fuca and Gorda Plates from Ambient Noise: **H Wang**, M H Ritzwoller, S Zhong

1340h **T23E-0426 POSTER** Seismic Evidence that the Juan de Fuca Plate is Fracturing from the Bottom Up: **W B Hawley**, R M Allen

1340h **T23E-0427 POSTER** A lithospheric-mantle phase boundary at 30 km depth beneath the northeast Pacific NoMelt site: **D Lizzaralde**, J B Gaherty, J A Collins, G Hirth, R L Evans

1340h **T23E-0428 POSTER** Seismic attenuation structure of the Pacific upper mantle in the NoMelt experiment region as constrained by Rayleigh waves from earthquakes: **Z Ma**, C A Dalton, D W Forsyth, J B Gaherty


1340h **T23E-0430 POSTER** Complete Lithospheric Rupture Extent in the Wharton Basin Revealed from Teleseismic Double-Difference Relocations of the 2012 Aftershock Sequence: **K B Kwong**, H DeShon, J Saul, C H Thurber


1340h **T23E-0432 POSTER** Geophysical characteristics of the Southern Ocean mantle domain: **S S Kim**, J Lin, H Choi, S H Park

1340h **T23E-0433 POSTER** P and S wave investigation of the upper crust across the Eastern Lau Spreading Center: **C Lata**, R A Dunn, D E Eason

1340h **T23E-0434 POSTER** Turning Back the Tectonic Clock of Ellice Basin: Interpreting a Relict Spreading System in the Absence of Magnetic Reversals: **E Benyshek**, P Wessel, B Taylor

1340h **T23E-0435 POSTER** Oceanic Axial Depth And Age-Depth Distribution Of Oceanic Lithosphere: Comparison Of Magnetic Anomaly Picks Versus Age-Grid Models: **D B Rowley**

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**DI24B (CC) eLightning Theater II**

**Tuesday 1600h**

**Advances in Computational Geosciences II**

**eLightning (joint with C, GP, S)**

**Presiding:** **Juliane Dannberg**, University of California Davis; **Marc Spiegelman**, Columbia University; **Jed Brown**, University of Colorado at Boulder; **Dave May**, University of Oxford;

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1600h Introductory Remarks:

1601h **DI24B-21** Adaptive Multigrid Solvers for Stokes flow in ASPECT: **T Heister**, T Clevenger


1610h **DI24B-24** Maybe “failure” is telling you something important…: **M W Spiegelman**

1613h **DI24B-25** The Reduced Basis Method in Geosciences: Application to the Upper Rhine Graben Model: **D Degen**, J Freymark, K Veroy, F Wellmann, M Schew-Wenderoth

1616h **DI24B-26** Application of full waveform inversion to short-offset seismic data lacking low frequencies: **V Sallares**, D Dagnino, C Gras, C E Jimenez Tejero, A Melendez, C R Ranero


1622h **DI24B-28** Wave propagation in a medium with cavities: **P M Adler**, A Pazdniakou

1625h **DI24B-29** 3D Reverse-Time Migration using the Excitation Amplitude Method on Xeon Phi Processors: **J Lee**, S Jo, B Park, W Ha

1628h **DI24B-30** Application of window-based deghosting processing to marine seismic data, in Ulleung Basin, Korea: **S Kim**, N H Koo, S Shin, W Chung

1631h **DI24B-31** Pure Quasi-P Wave Modeling in Transversely Isotropic and Orthorhombic Media: **X Li**, H Zhu
1634h **DI24B-32** Real-time interactive analyses and visualization of massive and diverse seismological observations: **C Havlin**, P Moulik, R Maguire, V Lekic

1637h **DI24B-33** Exploring Earth’s interior in collaborative immersive VR environments: **S Duzgun**, E Isleyen, R Orsurban, E Bozdag, D Pugmire, W Lei, Y Ruan, J Tromp


1643h Concluding Remarks:

**S24B (MM) Independence E**

**Tuesday 1600h**

**Heterogeneity and Scaling Relations Impacting the Geomechanical Behavior of Fault Zones I**

**Presiding:** Martin Schoenball, Lawrence Berkeley National Laboratory; Paul Selvadurai, ETH Zurich; Patricia Martínez-Garzón, Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences; James Kirkpatrick, Colorado State University;

1600h **S24B-01** Asperity Distributions in Faults Based on Observed Fault Topography: **E E Brodsky**

1615h **S24B-02** Spatial and Temporal Variations of Upper Crustal Anisotropy Along the San Jacinto Fault Zone in Southern California: Constraints from Shear Wave Splitting Analysis: **E Jiang**, K H Liu, Y Gao, S S Gao

1630h **S24B-03** A multi-scale approach for assessing the impacts of mechanical stratigraphy and structural controls on fluid flow across heterolithic fault zones: **H B Riegel**, L Mattioni, F Agosta, C Di Celma, T Emanuele

1645h **S24B-04** Fracture heterogeneity, fluid overpressure, and injection-induced seismicity: **W Wu**, Y Ji, Y Jia

1700h **S24B-05** Estimation of gradual stress changes before the 2016 Mw7.0 Kumamoto, Japan, earthquake: **A Noda**, T Saito, E Fukuyama, T Terakawa, M Matsu’ura

1715h **S24B-06** Fluid-driven basement earthquake faulting during the 2013 Castor seismic sequence, Spain: heterogeneously overpressured fault zone?: **M Diez**, S Barbot

1730h **S24B-07B** Natural Slow Growing and Long Duration Seismicity Swarms: Reactivating Joints or Foliations in Igneous Plutonic Rock in the Central Peninsular Ranges, Southern California: **E Hauksson**, Z E Ross, E S Cochran

1745h **S24B-08** Probabilistic approaches in earthquake rupture simulations: **O Zielke**

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**T24A (MM) Liberty M**

**Tuesday 1600h**

**Deep Structures of the Eastern Tethyan Orogenic Belt and Related Geodynamics Processes I**

**Presiding:** Xiaofeng Liang, State Key Laboratory of Lithospheric Evolution, Institute of Geology and Geophysics, Chinese Academy of Sciences; Sofia-Katerina Kufner, Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences; Xiaohui Yuan, Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences; Shunping Pei, Institute of Tibetan Plateau Research, Chinese Academy of Sciences;

1600h **T24A-01** Recent research progresses on the deep structure and evolution of the Iranian Plateau: **L Chen**, B Wan, M Talebian, M Jiang, Y Chu, A Ghods, M M Khatib, W Xiao, R Zhu

1615h **T24A-02** Joint Inversion of Surface Wave Dispersions and Receiver Functions with P-wave Data: **J Li**, X Song, L Zhu, Y Deng

1630h **T24A-03** Crustal Lg Attenuation in the Tethyan Orogenic Belt: **L Zhao**, X B Xie, X Tian, Z Yao

1645h **T24A-04** Crustal high-velocity zones in SE Tibet from dense array tomography: implication for complex crustal material transport patterns: **H Yao**, S Hu, Y Yang, Y Yang

1700h **T24A-05** Discrepant crustal deformation beneath the Pamir revealed by joint inversion of surface wave dispersion and receiver function: **W Li**, Y Chen, X Yuan, B Schurr, J Mechie

1715h **T24A-06** A multi proxy record of the uplift history of southern Tibet: **L Ding**

1730h **T24A-07** Tomographic Structure of Jiuzhaigou Earthquake, Sichuan, China and its Relationship with Wenchuan Earthquake: **S Pei**, Q Sun, J Su, Y Liu, X Xue

1745h **T24A-08** Tearing of Indian Mantle Lithosphere from High-Resolution Seismic Images and its Implications for Lithosphere Coupling in Southern Tibet: **J Li**, X Song
T24B  (MM) Liberty L
Tuesday  1600h

Synthesis: Knowns and Unknowns of the Cascadia Subduction Zone I  (joint with G, NH, S, V)

Presiding: Helen Janiszewski, Carnegie Institution for Science; Wenyuan Fan, Woods Hole Oceanographic Institution; Ikuko Wada, University of Minnesota Twin Cities; Caroline Seyler, McGill University;

1600h  T24B-01 Results From 40 Years of Crustal-Scale Active-Source Wide-Angle Seismic Profiling in Cascadia: T M Brocher

1615h  T24B-02 Does topography along the Cascadia forearc reflect permanent deformation of North America?: E Kirby, K Furlong, W von Dassow

1630h  T24B-03 Dynamic Rupture Models of the Cascadia megathrust earthquake: how the transition zone governs rupture propagation: Y Huang, M D Ramos

1645h  T24B-04 The Effect of Kinematic Earthquake Rupture on Near-Field Hazards Along the Cascadia Subduction Zone: A Williamson, D D Melgar, D Rim, R J LeVeque

1700h  T24B-05 The evolution of the hydration state of the Juan de Fuca plate from Ridge to Trench offshore Washington State: B Boulahanis, J P Canales, S M Carbotte, H D Carton, S Han, M R Nedimovic

1715h  T24B-06 Seismic imaging of the Gorda slab subduction interface near the Mendocino triple junction: J Gong, H Guo, J J McGuire

1730h  T24B-07 The Electrical Conductivity of Dehydrating Lawsonite and Implications for Cascadia Subduction Zone Structure: A Pommier, R L Evans, Q Williams

T24C  (MM) Liberty N-P
Tuesday  1600h

The Giants of Tectonophysics

Presiding: Ross Stein, Temblor, Inc. and Scientist Emeritus, USGS; Julia Morgan, Rice University; Margarete Jadamec, The State University of New York at Buffalo; Jolante van Wijk, New Mexico Institute of Mining and Technology;

1600h  T24C-01 G.K. Gilbert: A Life in Science for the Commonstock: D D Richter Jr

1615h  T24C-02 Harry Fielding Reid: Discoverer of the elastic driving forces of the great 1906 earthquake: R S Stein

1630h  T24C-03 James C Savage and the Birth of Modern Tectonic Geodesy: W R Thatcher

1645h  T24C-04 Robert E. Wallace: Pioneer in Paleoseismology: S G Wesnousky

1700h  T24C-05 George A. Thompson: How unabated curiosity about Earth’s topography led us deep into the crust and mantle: M L C Zoback, T Parsons

1715h  T24C-06 George Plafker and the 1964 Alaska Earthquake: Seeing is Believing: H Fountain

1730h  T24C-07 Tanya Atwater: Using Plate Tectonics to Explain Geologic History of Western North America: J M Stock

1745h  T24C-08 Paul G. Silver: From Mantle Flow to PBO: S C Solomon
**Session Information**

**Oral Sessions**
Sessions are being held in the **Convention Center (CC)** and **Marriott Marquis (MM)**

**Poster Sessions**
Posters are on display in the following venue throughout the week: **Hall A-C (Poster Hall)**

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**Session & Paper Numbering**

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation.

Example: A21A-01 = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

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The program is current as of 06 December 2018. An omitted abstract ID number in the presentation order indicates that the abstract has been withdrawn by the presenter from the session. Please refer to the online program at [https://agu.confex.com/agu/fm18/meetingapp.cgi/Home](https://agu.confex.com/agu/fm18/meetingapp.cgi/Home) for updates.

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**Wednesday A.M.**

DI31B  (CC) Hall A-C (Poster Hall)

**Wednesday 0800h**

**Advances in Computational Geosciences III**

**Posters (joint with C, GP, S)**

**Presiding:** Juliane Dannberg, University of California Davis; Marc Spiegelman, Columbia University; Jed Brown, University of Colorado at Boulder; Dave May, University of Oxford;

0800h DI31B-0002 POSTER Modelling seismic rupture scenario by means of a Fiber Bundle Model: M Monterrubio-Velasco, R Zúñiga, Q Rodríguez, V Márquez, C Carrasco-Jiménez, A Aguilar, J de la Puente

0800h DI31B-0003 POSTER Accelerating the 3-D curved grid finite-difference modelling for non-planar rupture dynamics with GPU graphics cards: M Li, Z Zhang

0800h DI31B-0004 POSTER Two Combinatorial Optimization Methods that Determine On-Fault Earthquake Magnitude Distributions: E L Geist, T Parsons

0800h DI31B-0005 POSTER Construction of Wavelets on the Sphere for Global Data Representation and Efficient Solution of Inverse Problems: P A Vetter


0800h DI31B-0007 POSTER Fast Time Integration and Performance Portability: J Brown, V Barra, M Normile, J Thompson

0800h DI31B-0008 POSTER giapy: Glacial Isostatic Adjustment in Pythom: Nondimensionalized relaxation method for computation of time-domain viscoelastic Love numbers: S B Kachuck, L M Cathles

0800h DI31B-0009 POSTER The Underworld renovation project using PETScDS: L N Moresi, J Giordani, J Mansour, M Knepley

0800h DI31B-0010 POSTER Improved boundary conditions for mid-ocean ridge numerical modeling with migration and asymmetric spreading: E Miglio, M Penati, M Cuffaro

0800h DI31B-0011 POSTER High-Order Finite-Element Methods for Two-Phase Flow on Unstructured Meshes: D May, D W Rees Jones, R F Katz

0800h DI31B-0012 POSTER Random walks for quantifying the uncertainty in the flow response in heterogeneous media: A H Delgoshaie, P W Glynn, P Jenny, H Tchelepi

0800h DI31B-0013 POSTER Accuracy and performance tradeoffs for robust porous media discretization with non-orthogonal grids and tensor coefficients: R A Cronin, J Brown

0800h DI31B-0014 POSTER Parallel Groundwater Modeling using MODFLOW 6: J D Hughes, J Verkaik, C Langevin


0800h DI31B-0016 POSTER Enriched Galerkin approach for density-driven flow in coastal aquifer: J H Lee, Y H Seo, S Lee

0800h DI31B-0018 POSTER Application of a Newton-Krylov Solver to Spin-up Biogeochemical Tracers: K T Lindsay

0800h DI31B-0019 POSTER What is the Optimal Mesh Layout for Staggered Unstructured Discretisation Schemes?: D Engwirda

S31A  (MM) Independence E

Wednesday  0800h

Induced Seismicity in the United States and Canada I @ (joint with H, NG, T)

Presiding: Cornelius Langenbruch, Stanford University; Carsten Dinske, Freie Universität Berlin; Ruijia Wang, University of Alberta; Matthew Weingarten, Stanford University;

0800h S31A-01 How relic fault zone structure guides transmission of elevated pore pressures from nearby fluid injection sites: J R Rice, A Yehya, Z Yang

0815h S31A-02 Evaluating controls on US midcontinent seismicity through modeling of wastewater injection into the Arbuckle Group aquifer: A Hollenbach, T S Bidgoli, E Ansari, K Nolte

0830h S31A-03 Seismicity in Central Oklahoma shows signatures of reservoir-induced seismicity: L Johann, S A Shapiro, C Dinske

0845h S31A-04 Response of induced seismicity to injection rate reduction: models of delay, decay, quiescence, recovery and Oklahoma.: D Dempsey, J Riffault

0900h S31A-05 A physics-based probabilistic approach to estimate pressure necessary to trigger seismicity from saltwater disposal: D W S Eaton, B K Hosseini

0915h S31A-06 Quantifying the role of aseismic slip in the source processes of induced earthquakes: S K Y Lui, Y Huang

0930h S31A-07 Characterizing seismogenic fault structures in Oklahoma: R Skoumal, J O Kaven, J I Walter

0945h S31A-08 Advanced Geomechanical Analysis for Fault Slip due to Injection for Cases Identified as Higher Risk by the Screening Level FSP Tool: S P Lele, T Tyrrell, B deMartin
T31A  (MM) Liberty N-P

Wednesday  0800h

Active Tectonics, Seismicity, and Surface Processes Interactions in South and East Asia III  
(joint with EP, NH, S)

Presiding: J Bruce Shyu, National Taiwan University; Brian Yanites, Indiana University Bloomington; Xiwei Xu, Institute of Crustal Dynamics, China Earthquake Administration; Takashi Azuma, Geological Survey Japan;

0800h  T31A-01 Near-Fault Underground Structure of the Yatsushiro Plain along the Hinagu Fault Zone in Central Kyushu, Japan, by Various Seismological Surveys: K Asano, T Iwata, M Yoshihito, S Okamoto, M Suehiro

0815h  T31A-02 Tectonic activity on and around the Shibetsu fault zone, eastern Hokkaido, Japan: T Azuma

0830h  T31A-03 Crustal-scale structure beneath Myanmar from joint inversion of receiver function, Rayleigh wave ellipticity and surface wave dispersion: X Wang, S Wei, Y Wang, P Maung Maung, J Hubbard, T Bodin

0845h  T31A-04 Feedbacks between sedimentation, normal faulting, and magmatic accretion at the Andaman Sea spreading center: J A Olive, C de Sagazan

0900h  T31A-05 Geometry and kinematics of last-stage structures in the exhumation of young blueschists in the Taiwan arc-continent collision: M R Chojnacki, T B Byrne, C H Tsai, L Aman, L Donati, R T Boleta, J C Lewis, J C Lee, E C Yeh, G R Ho

0915h  T31A-06 Rapid Exhumation of the Eastern Central Range of Taiwan: Constraints from Brittle Deformation Patterns.: L Aman, L Donati, R T Boleta, J C Lewis, M R Chojnacki, T B Byrne, J C Lee, E C Yeh, G R Ho, S C Chao

0930h  T31A-07 Probing Coulomb Stress Triggering Effects for ML >= 5.5 earthquakes in Taiwan Central Mountain Area: S Li, S Wdowinski

T31B  (MM) Liberty M

Wednesday  0800h

Crystallographic Fabrics and Microstructures: Geodynamic Marker of Earth's History and Today's Internal Structure I  
(joint with S)

Presiding: Katsuyoshi Michibayashi, Nagoya University; Junfeng Zhang, China Univ. of Geosciences; Haemyeong Jung, Seoul National University;

0800h  T31B-01 Microstructural evolution investigated with equal channel angular pressing: L N Hansen, H Unwin, R Goddard, D Wallis

0815h  T31B-02 From intracrystalline distortion to tectonic motion: Unifying field, microstructural, and textural analyses in heterogeneous shear zones through orientation-dispersion methods: S C Kruczenberg, Z D Michels, M M Parsons

0830h  T31B-03 Lattice preferred orientation of chloritoid and implications for seismic anisotropy in subduction zones: J Lee, M Mookherjee, H Jung, R Klemd


0900h  T31B-05 Textures and seismic anisotropy of slow-spreading oceanic crust and serpentinized mantle at Atlantis Massif (Atlantic Ocean): J Behrmann, R Kuehn, M Stipp, B Leiss, J Kossak-Głowczewski

0915h  T31B-06 A Unified Dependence of Dislocation Creep on Water Fugacity in Clinopyroxene: J Zhang, Z Wang


0945h  T31B-08 Some remarks on the development of lattice-preferred orientation in olivine: S I Karato

T31C  (CC) Hall A-C (Poster Hall)

Wednesday  0800h

Deep Structure and Geodynamics of the Continental Convergence Zones III Posters

(joint with S, V)

Presiding: Shuwen Dong, Chinese Academy of Geological Sciences; Larry Brown, Cornell Univ; Mian Liu, University of Missouri Columbia; Rui Gao, Institute of Geology, Chinese Academy of Geological Sciences;

0800h  T31C-0298 POSTER Crustal Seismic Anisotropy beneath Satluj Valley, Northwest Himalaya and Its Tectonic Implications: M Wadhawan, D Hazarika, N Kumar

0800h  T31C-0299 POSTER Detailed Electrical Structure of the Underthrusting Indian Lithosphere Beneath Western Tibet: J Gu, S Jin, W Wei, G Ye, H Dong, L Zhang, C Xie, Y Yin, J Jing
0800h **T31C-0300 POSTER** Revealing Moho and lower crust fabrics to the Lhasa Terrane by Large Dynamite shots Near Vertical Reflection Seismic Profiling: Z SHI, W Li, H Li, X Guo, R Gao

0800h **T31C-0301 POSTER** Primary Discussion about Tectonic Deformation Characteristics in East Yarlungzangbo Suture and Subsurface Structure of Yarlhashampo Dome Revealed by Deep Seismic Reflection Profile: X Dong, W Li, Z Lu, X Guo, R Gao

0800h **T31C-0302 POSTER** Seismic Evidence of Tearing of the Indian Subducting Lithospheric Slab and the Tibetan Mantle Lithosphere Beneath the Yadong-Gulu Rift in Central Tibet: Z Liu, X Tian, X Liang, Y Chen, H Zhang, G Zhu

0800h **T31C-0303 POSTER** Three Dimensional Crustal Vp and Vs Structure Beneath the Southern Segment of the Tan-Lu Fault Revealed by Active Source and Earthquake Data: Y Zhang, B Wang, T Xu, W Wang, Y Xu, L Li

0800h **T31C-0304 POSTER** Deep 3D electrical structure in Eastern Tibet-Western Sichuan: C Yu, C Qu, X Wang, Z Xiangzhi, H Zhang, L Su, Z Zheng

0800h **T31C-0305 POSTER** Eastward Extrusion and Northward Expansion of the Tibetan Plateau —Discussions for the Deep Processes of the Plateau Uplift: Z Ye, R Gao, Q Li, X Xu, X Huang, X Xiong, W Li

0800h **T31C-0306 POSTER** New Seismic Evidence for Continental Collision During the Assembly of the Central Asian Orogenic Belt: Z Ye, H Zhang, Q Li, X Wang

0800h **T31C-0307 POSTER** High resolution imaging of lithospheric structures in northeastern Tibet by full waveform inversion of teleseismic body waves: Y Wang, R Gao

0800h **T31C-0308 POSTER** Upper mantle Vp/Vs image beneath the Central Tibet from Receiver Function Tomography: S Si, R Gao, X Tian

0800h **T31C-0309 POSTER** Combined mechanics of visco-plastic deformation, partial melting and brittle damage in the east margin of the Tibetan Plateau: J Liu

0800h **T31C-0310 POSTER** The Crust and Upper Mantle Structure and the Geodynamics Beneath Southeastern China from Broad-band Seismic Observation Data: L Wang, D Yu, M Xu, Z Huang, H Li

0800h **T31C-0311 POSTER** Correct the time of Hutubi seismic station using the large volume air-gun source in Hutubi Xinjiang: J Su, Q Wang

0800h **T31C-0312 POSTER** Sichuan Basin Fault Propagation Fold Seismic Profile Interpretation And Predicting petroleum: Z Yang

0800h **T31C-0313 POSTER** The seismic evidences of velocity variation for Changbaishan volcanism in Northeast China: F Zhang, Q Wu, Y Li, R Zhang, J Pan

0800h **T31C-0314 POSTER** Magnetotelluric Evidence for Asymmetric Simple Shear Extension and Lithospheric Thinning in South China: S Xu, M J Unsworth, X Hu, W Mooney

0800h **T31C-0315 POSTER** Developing a novel method to extract nonlinear viscoelastic characteristics of Earth rock by propagating elastic waves: X Feng, M Fehler, S Brown, T Szabo, D Burns

0800h **T31C-0316 POSTER** Early Cretaceous A-type Rhyolite and Adakitic Lavas from the Songliao Basin, NE China: Magmatic Tracer of Paleo-Pacific Plate Roll-back: Z Ji, W Ge, H Yang, Y Dong

0800h **T31C-0317 POSTER** Forward Modeling of the Thin Sand-shale Interbed: Taking the P Reservoir in Block B1 of D Oilfield as an Example: H LI, R Gao

0800h **T31C-0318 POSTER** Tomography and geodynamic study for the velocity structure of the upper mantle in the eastern part of Southern China: X Wang

0800h **T31C-0319 POSTER** New images of the crustal structure beneath eastern Junggar from a high-density seismic array: X Yang, X Tian

0800h **T31C-0320 POSTER** Characteristics of asthenosphere distribution in the eastern segment of Central Asia orogenic belt revealed by long period magnetotelluric(LMT) detection: J Kang, J Han, W Liu

0800h **T31C-0322 POSTER** Receiver Function Imaging of Mantle Transition Zone Discontinuities Beneath the Tibetan Plateau and Adjacent Areas: Z Miao, S S Gao, M Sun, K H Liu

0800h **T31C-0323 POSTER** Folding deformation or draping sedimentation: forebulge migration in the southern South China Sea?: L Wang, L Zhang, Z Lei

0800h **T31C-0324 POSTER** A Post-collision Tectonic Activity Model Dominated by Extension: Taking the Dabie Mountain Area as an Example: C Yan, X Guo, R Gao

0800h **T31C-0325 POSTER** Lithospheric electrical structure of the Central Asian Orogenic Belt: H Liang, R Gao, H Hou

0800h **T31C-0326 POSTER** The source properties of Jiuzhaigou earthquake.: S Li, R Gao, X Xu

0800h **T31C-0327 POSTER** Sub-Moho Surface Structure of Songliao Basin in Northeast China: Q Meng, G Ma, Y Ming, Q Wu
East Asia Tectonic and Geodynamic History Since the Mesozoic III Posters (joint with DI, S, V)

Presiding: Jonny Wu, University of Houston; Kenichiro Tani, National Museum of Nature and Science; Lorenzo Colli, University of Houston; Jinwei Gao, Institute of Deep-sea Science and Engineering, Chinese Academy of Sciences;

0800h T31D-0328 POSTER Metamorphosed Basic-Calcareous-Siliceous Rock Association in Yangtze Miaowan Recorded Neoproterozoic Arc-Continent Collisional Event: Y Li, J Zheng, B Wang

0800h T31D-0329 POSTER Lithospheric Structure near the Yangtze and Cathaysia Block, South China: Implications for Asthenosphere Upwelling and Lithosphere Modification: L He, X Sun, J Li, S Ai, M Xu

0800h T31D-0330 POSTER Crust and uppermost mantle structure beneath Da Xing'an Range area from ambient noise tomography: Y Ai, Y Chen, Y Peng, M Jiang

0800h T31D-0331 POSTER Intracontinental Deformation and Crustal Structure: Hangay Dome, Central Mongolia: J Welkey, A Meltzer, J C Stachnik, U Munkhuu, B Tsagaan, R M Russo

0800h T31D-0332 POSTER Seismic evidence on different rifting mechanisms in southern and northern segments of the Fenhe-Weihe Rift zone: Y Zheng, S Ai

0800h T31D-0333 POSTER Lithospheric structure of SH wave beneath the northeastern Tibet from Love wave tomography: Y V Fu, L Li Dr

0800h T31D-0334 POSTER Lithospheric Nature in South China: Implication from High Resolution 3-D Shear Wave Velocity Structures: S Ning, Z Guo, Y J Chen

0800h T31D-0335 POSTER Formation of the orogenic curvature: Insights from the Triassic Xuefengshan Belt, South China: Y Chu, W Lin

0800h T31D-0336 POSTER Mesozoic Poly-layered Decollement System in South China: One Stage Kinematic Formation Based on Structures in the Front Zone: H Ma, Y Wang, Y Huang

0800h T31D-0338 POSTER Subsiding Sundaland: L Husson, A C Sarr, P Sepulchre, A M Pastier, K Pedoja, M Elliot, C Arias Ruiz, T Solihuddin, S Aribowo, S Susilohadi

0800h T31D-0339 POSTER Testing Proto-South China Sea Plate Reconstructions by Data Assimilation into TERRA Global Mantle Convection Models: Y A Lin, L Colli, J Wu

0800h T31D-0340 POSTER Crustal P- and S-wave velocity structure across the NE South China Sea continental margin: W Hou, C F Li, W Xiaoli

0800h T31D-0341 POSTER Lateral differences in the crustal structure of the margin of SE South China Sea: N Qiu, Y Yao, Z Sun, J Zhang, L Wang, D Xu

0800h T31D-0342 POSTER Lithospheric Structure of the Southwest Subbasin, South China Sea and Its Implication on Breakup Process: L Hu, P Zhang, T Hao

0800h T31D-0344 POSTER Age and geochemical constraints on Cenozoic magmatic evolution in Southern Sulawesi: C Y Tien, M F Chu, S L Chung, A Maulana, M Mawaleda, H Y Lee, X Zhang

0800h T31D-0345 POSTER Discovery of Pleistocene adakitic volcanism in southern Sakhalin: K Tani, H Kawabata, O Ishizuka, A Y Martynov, T Sano

0800h T31D-0346 POSTER An active small basin structure along the back-arc basin of the Ryukyu arc in the northwest Pacific: K Arai, T Inoue, T Sato

0800h T31D-0347 POSTER Seismic structure in the transition from continental rifting to back-arc basin opening in the southeastern Japan Sea back-arc basin: T Sato, T No, R Arai, S Miura, S Kodaira

0800h T31D-0348 POSTER Opening tectonics of the Japan Sea inferred from structural features of its marginal zones: H Mashima

0800h T31D-0349 POSTER Magmatic additions to the middle and lower crust during rifting govern basin response to tectonic inversion in a magma-rich back-arc (NE Japan): A Van Horne, H Sato, T Ishiyama, N Kato, S Abe, H Saito, M Inaba, M Matsubara, T Takeda

0800h T31D-0350 POSTER The effect of shear heating on formation of detachment faults: implications for asymmetric extension of back-arc basin: T Jo, B D So, G B Kim

0800h T31D-0351 POSTER The Finite Element Numerical Simulation of Tectonic Stress Field In and Around the Okhotsk Micro-plate: S Wang, J Xu, Z Wang, D Wei

0800h T31D-0352 POSTER Geometry, Kinematic Characteristics of NWW-Trending Faults in Bohai Sea Area, China: Implication for Subduction of Pacific Plate Since Eocene: X Chen, W Li, Z Wu, Q Zhang

0800h T31D-0353 POSTER Geometry, Kinematics and Displacement Characteristics of Late Jurassic-Early Cretaceous Strike-slip Faults in the Subei-South Yellow Sea Basin, China: A Study Based on Seismic Reflection Data: F Yang, P Hu
0800h  **T31D-0354 POSTER** Reconstructing Izanagi-Pacific ridge subduction under East Asia from imaged and predicted mantle structure: **J Wu**, Y A Lin, N E Flament, T J Wu

0800h  **T31D-0355 POSTER** Temporal change in subducted oceanic crust along the NE Asian margin in the Mesozoic: Insights from accreted oceanic rocks in NE Japan.: **H Ueda**, A Saito, M Ozawa, M Ishino, R Kota

0800h  **T31D-0356 POSTER** A broad distribution of accreted intraplate volcanic edifice in the Late Cretaceous Tokoro greenstone belt, NE-most of Japan: **S Sakai**, N Hirano, Y Dilek, S Machida, K Yasukawa, Y Kato

0800h  **T31D-0357 POSTER** Stratigraphy of the Sorachi Group of Hokkaido, Japan - Another oceanic plate in the Mesozoic NW Pacific.: **R Kota**, H Ueda, M Ozawa

0800h  **T31D-0358 POSTER** Plateau in Eastern China During the Mesozoic: Evidences from Igneous Rocks: **S SU**, Y Cui

0800h  **T31D-0359 POSTER** Timing of ductile shearing in the Honam shear zone, SW Korea: constraints from SHRIMP U-Pb zircon geochronology of granitoids: **W S Kee**

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**T31E (CC) Hall A-C (Poster Hall)**

**Wednesday  0800h**

**Geospatial Artificial Intelligence: Machine Learning in Earth Sciences Posters (joint with GC, IN, OS)**

**Presiding:** Orhun Aydin, ESRI; Emily Law, CalTech JPL; Warren Wood, Naval Research Laboratory; Jens Klump, CSIRO Mineral Resources;

0800h  **T31E-0360 POSTER** Using Spatially Constrained Unsupervised Machine Learning to Objectively Derive Climate Zones of the Contiguous United States: **K A Butler**

0800h  **T31E-0361 POSTER** Delineation of Climate regions over Korean Peninsula Using Machine Learning Approaches: **S Park**, H Park, J Im, C Yoo, D Han

0800h  **T31E-0362 POSTER** Long-lead Forecast of Heatwaves in the Eastern United States using Artificial Intelligence: **N Sobhani**, D Del Vento, A L Fanfarillo


0800h  **T31E-0364 POSTER** Prediction of CO₂ flux using Long Short Term Memory (LSTM) Recurrent Neural Networks with data from Flux towers and OCO-2 remote sensing: **P Nguyen**, M Halem


0800h  **T31E-0367 POSTER** Runoff Prediction using Long-Short Term Memory Model: **I Demir**, Z Xiang

0800h  **T31E-0368 POSTER** Fast Neural Network Emulation of a Planetary Boundary Layer Parameterization in Weather Research Forecasting Model: **J Wang**, P Balaprakash, V R Kotamarthi


0800h  **T31E-0370 POSTER** Machine-learning – converting geoscience data into predictive geochemical and 3D surface models.: **J Wilford**, K Czarnota, S Basak, L LachlanMccalman, D Steinberg, N Chhajed, R Hassan

0800h  **T31E-0371 POSTER** Using machine learning to classify landforms for minerals exploration: **J F Klump**, T’Albrecht, I González-Álvarez, G Smith

0800h  **T31E-0372 POSTER** Continuous monitoring of volcano-seismic signals with Recurrent Neural Networks: **M Titos Luzón**, A Bueno Rodriguez, L Garcia Martínez, I Álvarez Sr, C Benitez, J M Ibáñez

0800h  **T31E-0373 POSTER** Deep Learning of Geological Structures in 3-D Seismic Data: **T Wrona**, I Pan, R E Bell, H Fossen, R Gawthorpe

0800h  **T31E-0374 POSTER** Assign Points To Existing Clusters: An algorithm for labeling clustered point cloud datasets for predicting physical variables: **S M Hendryx**

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**T31F (CC) Hall A-C (Poster Hall)**

**Wednesday  0800h**

**Numerical and Laboratory Analogue Models of Dykes, Sills, and Hydraulic Fractures Posters (joint with V)**

**Presiding:** Wei Fu, University of Pittsburgh; Joseph Morris, Lawrence Livermore National Laboratory; Delal Gunaydin, University of Pittsburgh; Andrew Bunger, University of Pittsburgh;
Wednesday 0800h

The Varied Roles of Aqueous Fluids near the Subduction Interface II Posters (joint with MR, S, V)

Presiding: Cailey Condit, Massachusetts Institute of Technology; Besim Dragovic, Boise State University; Jonathan Delph, Rice University; Melodie French, Rice University;

0800h T31F-0375 POSTER Vent location forecasts at calderas: a physics-based approach: E Rivalta, F Corbi, L Passarelli, T Davis, V Accocella, M A Di Vito

0800h T31F-0376 POSTER Laboratory Experimentation on Simultaneous Propagation of Multiple Dykes and Hydraulic Fractures: D Gunaydin, W Fu, A Bunger, C Cheng

0800h T31F-0377 POSTER A Reduced Order Model for Optimizing Hydraulic Fracture Stimulation of Horizontal Wells: C Cheng, A Bunger

0800h T31F-0378 POSTER Surface Roughness and Fluid Viscosity Controls on Propagation of a Hydraulic Fracture Across a Frictional Interface: S Mighani, B D Kilgore, C A Morrow, D A Lockner, J B Evans

0800h T31F-0379 POSTER Hydraulic Fracture Propagation Influenced by Spatially-Varied Natural Fracture Properties: W Fu, A A Savitski, B Damjanac, A Bunger

0800h T31F-0380 POSTER Propagation of a planar hydraulic fracture perpendicular to the isotropy plane of a transversely isotropic material: B T Lecampion, F E Moukhtari, H Zia

0800h T31F-0381 POSTER Evaluating a Fracturing Criterion Applicable to Both Magma Intrusion and Hydraulic Fracturing across Stress and Stiffness Contrasts: J Morris, J Huang, P Fu, R R Settgast, F J Ryerson

0800h T31F-0382 POSTER Instabilities in advancing hydraulic fracture fronts: S Rubinstein, W Steinhardt

0800h T31F-0383 POSTER Pressure And Fluid Driven Fracture Propagation Using Adaptive Phase Field Models: S Lee, M Wheeler

0800h T31F-0384 POSTER The Tip Region of a Near-Surface Hydraulic Fracture: Z Wang, E Detournay

0800h T31F-0385 POSTER Time-dependent Hydraulic Fracture Initiation: G Lu, R Prioul, E Gordeliy, G Aidagulov, E C Uwaifo, Q Lu, A Bunger

0800h T31F-0386 POSTER Experimental study of model dikes in gelatin: A E Dechert, S J Martel

0800h T31G-0387 POSTER Assessing the Role of Water in Alaskan Flat-Slab Subduction Using Thermodynamic and Phase Equilibria Modeling Approaches: S E Robinson, R C Porrer, T D Hoisch

0800h T31G-0388 POSTER Tracing Geophysical Indicators of Fluid-Induced Serpentinization in the Pampean Flat-Slab of Central Chile: A Nikulin, J Domino, J R Bourke, J J Park

0800h T31G-0389 POSTER Fluid Capture During Exhumation of Subducted Lithologies: A Fluid Inclusion Study from the Cycladic Blueschist Unit (Sifnos, Greece): B Dragovic, H M Brooks, H M Lamadrid, M J Caddock, R J Bodnar

0800h T31G-0390 POSTER Tracing Fluid Infiltration and Resultant CO$_2$ Release in Subducted Lithologies of the Cycladic Blueschist Unit, Greece: E M Stewart, J J Ague

0800h T31G-0391 POSTER Destroying an eclogite: feedback between deformation and metamorphism at the blueschist-eclogite transition: C Faber, C D Rowe

0800h T31G-0392 POSTER Fluid-rock interaction in subducted mélanges and its implications for fluid flow along the subduction plate boundary: K Noro, K Ujiie, N Nishiyama, Y Mori, H Masuyama

0800h T31G-0393 POSTER Grain boundary sliding as an antigorite CPO formation mechanism and implications for the slab-mantle boundary rheology: Example of antigorite schist from the Sanbagawa belt, SW Japan: T Nagaya, S R Wallis

0800h T31G-0394 POSTER Detection of mantle-derived fluid from the Makimine mélangé in the Shimanto accretionary complex: Evidence from helium isotope analysis on mineral veins: N Nishiyama, H Sumino, K Ujiie

0800h T31G-0395 POSTER Insights on Rock Hybridization Processes at the Slab-Mantle Interface from an Exhumed high-pressure Serpentinite-Eclogite Contact in the Voltri Massif (Ligurian Alps, Italy): E Codillo, F Klein, H Marschall, B Dragovic
0800h T31H-0396 POSTER Tracking pre-eruptive magmatic H2O evolution from the mantle to the surface at Klyuchevskoy volcano (Kamchatka arc): M Gavrilenko, P Ruprecht, M Krawczynski

0800h T31H-0397 POSTER Insights into the Tectonic Affinities and Fluid Histories of Ultramafic Rocks from the Massif du Sud, Central Chain, and HP/PT Terranes, New Caledonia: N H Raia, D Whitney, C P Teysier, S Lesimple

0800h T31H-0398 POSTER Hydrous melting in the deep mantle: J Yang, M Faccenda

0800h T31H-0399 POSTER Investigation of flow reverse towards backarc side in mantle wedge: Electrical conductivity distribution of subduction zone beneath the northern part of NE Japan: M Ichiki, T Kaida, Y Ogawa

0800h T31H-0400 POSTER Spatial distribution of seismic wave reflectors beneath the Yonezawa-Aizu region, northeastern Japan: M Suzuki, A Hasemi, T Okada, T Matsuzawa, N Umino, T Yamashina, N Tsumura

0800h T31H-0401 POSTER Electrical conductivity structure of northern Chilean subduction zone at 23°S from 2D magnetotelluric inversion: F A Reyes, D Diaz

0800h T31H-0402 POSTER Magnetotelluric studies of the Andean subduction zone in Southern Peru: M J Unsworth, J Chira, R Yupa, Y Antayhua-Vera, D Calla-Pilco, B Garcia Fernandez Baca, B Lee, C Nixon, D Ramos-Palomino, C Valencia-Miraval

0800h T31H-0403 POSTER Imaging the Lesser Antilles subduction zone from a new regional seismic velocity model and relocated seismicity: L Bie, A Rietbrock, S P Hicks, N Harmon, C Rychert, J Collier, S D B Goes

0800h T31H-0404 POSTER Seismic imaging of the Lesser Antilles subduction zone using s-to-p receiver functions and P-to-S delay times: Insights from VoiLA: B Chichester, C Rychert, N Harmon, J Collier, R Allen, T Henstock, S D B Goes, F Krueger, A Rietbrock

0800h T31H-0405 POSTER Toward Earthquake System Science: In-Situ Physical State from Geophysical Properties: A R Lowry, R V S Kanda, X Ma, B Scheppmann, D Schutt

V31C (MM) Marquis 6
Wednesday 0800h

The 2018 Eruptions of Kīlauea Volcano, Hawaii, and Fernandina and Sierra Negra Volcanoes, Galápagos II (joint with GH, IN, S, T)

Presiding: Ingrid Johanson, USGS; Matthew Patrick, USGS; Gregory Waite, Michigan Technological University; Claire Horwell, Durham University;
V31F  (CC) Hall A-C (Poster Hall)

Wednesday  0800h

Advancing Earth Science Through Geologic Mapping Posters (joint with EP, NH)

Presiding: Ren Thompson, USGS; Amy Gilmer, USGS-GECSC; Joseph Colgan, USGS-GECSC;


0800h V31F-0176 POSTER A quantitative reconstruction of the 2004-05 Etna compound lava field evolution through remote sensing methods: A Fornaciai, D Andronico, M Favalli, L Spampinato, S Branca, A Bonforte, L Lodato, L Nannipieri

0800h V31F-0177 POSTER A New Digital 3D Immersive Geologic Map: From the Plio-Pleistocene Calvello Basin of the Southern Apennines, Italy: A D Pitts, C Di Celma, T Emanuele, S Mazzoli, V Spina


0800h V31F-0179 POSTER Geologic map of the southern Stillwater Range, western Nevada: Insights into the development of silicic calderas and plutons: J P Colgan, D A John, C D Henry

0800h V31F-0180 POSTER Geologic map of the Stillwater Range and Clan Alpine Mountains, Nevada: Voluminous Oligocene silicic calderas and plutons of the ignimbrite flareup in the western US Cordillera: J P Colgan, D A John, C D Henry, M E Berry

0800h V31F-0181 POSTER Spatial Correlation of Ore Deposits and Silicic Calderas in the Western United States: J M Rossera, D S Coleman


0800h V31F-0183 POSTER Implications of the Newly Discovered Markagunt and Sevier Gravity Slides, Marysvale Volcanic Field, Utah USA: R F Biek, P D Rowley, D B Hacker

0800h V31F-0184 POSTER Reconstructing the Magmatic and Tectonic History of Continental Rifts: An Example from the Northern Rio Grande Rift, USA: R A Thompson, M A Cosca, K J Turner, L E Morgan, B Drenth, V J S Grauch

0800h V31F-0185 POSTER SPATIAL AND TEMPORAL CHARACTERIZATION OF THE PETRIFIED SPRINGS FAULT, CENTRAL WALKER LANE, NEVADA: DOCUMENTING MIDDLE MIocene DEXTRAL SLIP: A K Hoxey, J Lee, A T Calvert


0800h V31F-0187 POSTER Digital Bedrock Geology Compilation of the Central Sierra Nevada, Eastern California: S Attia, S R Paterson

0800h V31F-0188 POSTER The Late Cretaceous, migrating Jack Main intrusive complex, central Sierra Nevada, CA: Mapping as a powerful tool for unraveling magmatic histories: C Scheland, A Angulo, V Memeti, K E Ardill, S R Paterson

0800h V31F-0189 POSTER Geologic Mapping Plays Critical Role in Revealing the Volcanic, Structural, and Landscape Evolution of a Synextensional Miocene Volcanic Province, Western Whipple Mountains and Eastern Mopah Range, CA.: M K Fidler, P B Gans

0800h V31F-0190 POSTER Geological mapping, whole-rock geochemistry and isotope investigation of supracrustal rocks of the Jirau do Ponciano Dome: evidence for Archean-Paleoproterozoic crust beneath the Sergipano Fold Belt, Borborema Province, Brazil: H Lima, M M Pimentel, L Santos

0800h V31F-0191 POSTER Onset of terrane assembly in the Western Gondwana: clues from airborne geophysics, geological mapping and structural analysis of central Borborema Province, Brazil: L Santos, P A Cawood, R M Vidotti, H Lima, E L Dantas, E J dos Santos

0800h V31F-0192 POSTER Geologic Mapping of the Atacama and Taltal Fault Systems, Northern Chile: S P Mavor, J S Singleton, N M Seymour, R Gomila, G Heuser, S A Williams, G Arancibia
Tectonophysics: AGU Fall Meeting 2018

0800h **V31F-0193 POSTER** The tectonic history of the Arequipa Terrane informed by bedrock mapping of Neoproterozoic to Cambrian sediments in southern Peru: E B Hodgson, J L Crowley, F A Macdonald, J R Newmann, V Carlotto

0800h **V31F-0194 POSTER** Structural evolution of the Potosí Uplift, Sierra Madre Oriental, northeastern Mexico: Insight from detailed geologic mapping: S A Williams, J Singleton, M G Prior, S P Mavor, G E Cross

0800h **V31F-0195 POSTER** Popocatépetl, Iztaccíhuatl or Tláloc? Petrogenesis of the Older Deposits (>23,000 Yrs) of the Sierra Nevada, México: M F Flores Ríos, J Roberge, P E G Schaaf, S Salinas, D A Jerram, C A Angeles De La Torre

0800h **V31F-0196 POSTER** Mapping Through of the Use of Remote Sensing Techniques in the Sierra Madre Occidental, Mexico, to Better Understand Silver and Gold Hosted Structures: L N Alqahtani, P Goodell

0800h **V31F-0197 POSTER** Geologic lineament detection using satellite imagery and cloud-based geospatial processing: A L Nguy-Robertson, K Harvey

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**S32A (MM) Independence E**

**Wednesday 1020h**

**Induced Seismicity in the United States and Canada II (joint with H, NG, T)**

*Presiding: Cornelius Langenbruch, Stanford University; Carsten Dinske, Freie Universität Berlin; Ruijia Wang, University of Alberta; Matthew Weingarten, Stanford University;*

1020h **S32A-01** Tectonic Strain Rate as a Controlling Factor of Injection-Induced Earthquakes in Western Canada: H Kao, R D Hyndman, Y Jiang, R Visser, B Smith, A Babae Mahani, L J Leonard, H Ghofrani, J He

1035h **S32A-02** Preliminary next-generation stress map of the central and eastern USA: J E Lund Snee, M D Zoback

1050h **S32A-03** Stress States and Induced Seismicity Near Fox Creek, Alberta: A Quantitative Test of Frictional Faulting Theory: D R Schmitt, L Shen

1105h **S32A-04** Earthquake interactions in the Raton Basin, Colorado and New Mexico, USA: M R M Brown, S Ge

1120h **S32A-05** Characterizing the spatio-temporal variations in seismic anisotropy and fault characteristics near an Mw 4.1 induced earthquake in the Alberta basin: T Li, Y J Gu, R Wang, Y Chen, T R A Song, R Wang

1135h **S32A-06** Rupture Model of the 2016 M5.8 Pawnee Earthquake: M P Moschetti, S Hartzell, R B Herrmann

1150h **S32A-07** Hydraulic Fracturing Induced Seismicity in Ohio in 2016: Case study of the Conotton sequence in Harrison County: P A Friberg, M Brudzinski, S Fasola, M Kozlowska, R Skoumal

1205h **S32A-08** Earthquakes induced by hydraulic fracturing are pervasive in Oklahoma: R Ries, R Skoumal, M Brudzinski, A J Barbour, B Currie

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**T32A (MM) Liberty N-P**

**Wednesday 1020h**

**Active Tectonics, Seismicity, and Surface Processes Interactions in South and East Asia IV (joint with EP, NH, S)**

*Presiding: J Bruce Shyu, National Taiwan University; Brian Yanites, Indiana University Bloomington; Xiwei Xu, Institute of Crustal Dynamics, China Earthquake Administration; Takashi Azuma, Geological Survey Japan;*

1020h **T32A-01** Aftershock sequence of 2018 Mw6.4 Hualien earthquake in eastern Taiwan from dense seismic array data set: H Kuo-Chen, Z K Guan, W F Sun, P Y Jhong, D L Brown

1035h **T32A-02** Complex multifault geometry of the 2018 Mw 6.4 Hualien, Taiwan, offshore earthquake and its implications for seismic hazard and subduction boundary: K E Ching, A Yhokha, H C Chen, R Y Chuang, W L Chang, C L Chen, Y H Lee, R J Rau, J C Hu, K C Cheng, Y J Hsu

1050h **T32A-03** Multi-fault Rupture Triggering by the 0206 Mw 6.4 Offshore Hualien Earthquake: Insight of the Geodetic measurements and Numerical Modeling Result: M C Tsai

1105h **T32A-04** Geodetic Investigation of the 2018 Mw 6.4 Hualien Earthquake Co- and Postseismic Deformation: J Chen, M H Huang

1120h **T32A-05** Using Geodetic Data to Interpret Co- and Postseismic Deformation of the 2016 Mw 6.4 MeiNong Earthquake: R Butcher, M H Huang

1135h **T32A-06** Subsidence, Migration, and Destruction of a Plio-Pleistocene Retro-wedge ForediEEP Basin in Eastern Taiwan: Evidence for Un-Steady Growth of the Collisional Orogen: R J Dorsey, L S H Lai, W R Chi, J Y Yen, Y H Lee, M Marcaida, L Mesalles, M Grove

1150h **T32A-07** Active Retro-wedge Thrusting in the Philippine Sea Plate in the Taiwan Arc-Continent Collision: Evidence from Retro-deformation of Offshore Depth-migrated Seismic Reflection Profiles: Y H Hsieh, J Suppe, C S Liu
1205h **T32A-08** Joint zircon thermochronology modeling on the uplift history of the Middle Hsuehshan Range in Taiwan: **C J Shyu**, E Tan, L A Kirstein, F M Stuart, Y G Chen

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**T32B** (MM) Liberty L

**Wednesday  1020h**

**Flow and Fracture: Mixed Brittle-Viscous Behavior Throughout the Lithosphere I** (joint with MR, NH, S, V)

*Presiding: Christie Rowe*, McGill University; **Whitney Behr**, University of Texas at Austin; **Christopher Gerbi**, University of Maine; **Andre Niemeijer**, Utrecht University - Faculty of Geosciences - HPT Laboratory;

1020h **T32B-01** Low-angle brittle thrusting, localized viscous shear, and metasomatic reactions recorded in subduction mélanges: Implications for slow earthquakes in subduction zones: **K Ujiie**, H Saishu, K Noro, A Fagereng, C Tulley

1035h **T32B-02** Stress History During Exhumation from HP-LT Metamorphic Conditions – Transient Deformation at Low and High Stress-Loading Rates in a Ductile Extensional Shear Zone, Central Crete: **L Seybold**, C Trepmann

1050h **T32B-03** Quartz $\alpha\rightarrow\beta$ Phase Transition Drives Brittle Damage and Reaction in Viscous Continental Crust: **S E Johnson**, W J Song, A C Cook, S S Vel, C C Gerbi

1105h **T32B-04** Comparison of brittle- and viscous creep in quartzites: Implications for semi-brittle flow of rocks: **J E Reber**

1120h **T32B-05** Shear Heating and the Brittle-Ductile Transition: Thermomechanical Earthquake Cycle Simulations on Continental Strike-Slip Faults: **K L Allison**, E M Dunham

1135h **T32B-06** Fluid infiltration promotes both ductile and brittle deformation within the deep crust: Examples from Southwestern Montana and the Central Alps: **C B Condit**, M E French, K H Mahan, C T Lee, J Hayles, L Yeung

1150h **T32B-07** A Stress Perturbation Model in the Context of the Earthquake Cycle for Mid-crustal Earthquake Rupture in the Homestake Shear Zone, Colorado: **J L Allen**, C A Shaw

1205h **T32B-08** Solid flow regimes within sliding interfaces: some insights from numerical tribology: **G Mollon**
Fractures In Plutonic Rocks eLightning (joint with MR, V)

Presiding: Thomas Blenkinsop, Cardiff University; Brian Collins, USGS Landslide Hazards Program; David Healy, University of Aberdeen; Martin Ziegler, ETH Swiss Federal Institute of Technology Zurich;

1020h NH32B: Improving Earthquake Hazard and Loss Assessments by Combining Modeled, Remotely Sensed, Crowdsourced, and Ground-Truth Data eLightning Session:

1059h T32D-13 Insights into the Physics of Macroscopic Extensional Fracture Formation from a Natural Exfoliation Event on Långören Island, Finland (Summer 2014): K Leith, M Perras, T Siren, S Loew

1102h T32D-14 Fracture Pattern and Evolution in the Mineral Mountains Batholith, SW Utah: J M Bartley, D S Coleman

1105h T32D-15 Fracture network characterization in syntectonic granite: an example from Chitradurga Schist Belt, Dharwar craton, south India: A P Chatterjee, T K Mondal

1108h T32D-16 The Origin of Fractures in Plutonic Rocks: field evidence and three-dimensional numerical modelling of the Alta Stock, Utah.: J Ellis, T G Blenkinsop, H Davies

1111h T32D-17 Research on Rockfall Fragmentation and Movement Characteristics of Rock Slope Based on Energy Tracking Method: X Tang, J Xu

1114h T32D-18 Investigating the Evolution of Physical Properties of Reservoir Rocks Using a New True Triaxial Apparatus: J Browning, C Sanchez Roa, P G Meredith, D Healy, S R Harland, T M Mitchell

1117h T32D-19 Characterization of Fractured Networks in Geothermal Reservoirs: From Field Outcrops to Laboratory Measurements: C Sanchez Roa, T M Mitchell, J Browning, P G Meredith, G Magnarini, A P Jones, E H Oelkers

1120h T32D-20 Experimental study on stress sensitivity of conductivity of branch fractures in volcanic reservoirs: Y Zhang, H Ge, L Mu

1123h Concluding Remarks:
Deciphering Active Faults: Properties, Processes, and Activity Assessment I

**Presiding:** Aiming Lin, Kyoto University; Joseph White, Univ New Brunswick; Weiren Lin, Graduate School of Engineering, Kyoto University; Evangelos Tsakalos, National Center for Scientific Research (NCSR) "Demokritos", Institute of Nanoscience and Nanotechnology, Laboratory of Luminescence dating;

1340h **T33A-01** Secondary pyrite deformation and calcite veins in SAFOD damage zone; Implications for aseismic creep deformation mechanism at depths >3km: J Hadizadeh, A P Boyle

1355h **T33A-02** Changes in Paleo-stress Magnitude With Seismic Cycles in Large Thrust Faults: Y Hashimoto

1410h **T33A-03** Pattern of deformation and vertical-axis rotation along the Gaoligong strike-slip fault zone (Yunnan, China): A G Pellegrino, B Zhang, F Speranza, R Maniscalco, C Yin, C Hernandez-Moreno, A Winkler

1425h **T33A-04** Paleoseismic slip records and uplift of the Longmen Shan, eastern Tibetan Plateau: H Wang, H Li, L Zhang, Y Zheng, J Si, Z Sun

1440h **T33A-05** Structural complexity and Late Pleistocene tectonic activity near the junction between the Chelungpu and Sanyi thrusts, central western Taiwan: C E Hsieh, M Le Beon, W J Huang, I C Yen, P Y Chang, Y H Chen, S T Lu

1455h **T33A-06** DRILLING INTO THE ACTIVE FAULT DAMAGE ZONE: THE USE OF LUMINESCENCE DATING TECHNIQUES ON THE ASSESSMENT OF PREVIOUS ACTIVATIONS OF THE NOJIMA FAULT-JAPAN: M Kazantzaki, E Tsakalos, A Lin, T Nishiwaki

1510h **T33A-07** Was the Northern Extent of the Teton Fault ‘Erased’ by the Yellowstone Hotspot? Defining the Active Northern Extent of This System: R Thigpen, M L O'Dell, M M McGlue, S J Brown, E W Woolery, R Hoar, S Gallen

1525h **T33A-08** The Dynamic of the Southern Peru Cusco Fault System as inferred from Geodetic and Seismological Observations.: E O Norabuena, H J Tavera, J E Salazar

Oceanic Lithosphere: Structure and Evolution from Creation to Destruction I (joint with DI, S, V)

**Presiding:** Adrian Doran, Scripps Institution of Oceanography; Jennifer Harding, University of Texas, Institute for Geophysics; Zhitu Ma, Brown University;

1340h **T33B-01** Probing the Spatial Heterogeneity of Mature (>50 Ma) Upper Oceanic Crust using Long Offset Streamer Data offshore Alaska and Sumatra: A Becel, S C Singh, H D Carton

1355h **T33B-02** Transform Fault and Fracture Zone Relief Revisited: Evidence for Active Fracture Zone Tectonics: J P Morgan, A de Montserrat Navarro, P Wessel, E M Parmentier

1410h **T33B-03** Volcanic flux variations along the Hawaiian hotspot track: plume pulsations vs. plume-lithosphere interaction: M Ballmer, T Duvernay, J M O'Connor, N M Ribe

1425h **T33B-04** The long-lasting evolution of layer 2A in the western South Atlantic: Evidence for low-temperature hydrothermal circulation: D A Kardell, G L Christeson, J Estep, R Reece, R L Carlson

1440h **T33B-05** Jump in Asthenosphere Structure Across the Gorda Ridge Spreading Center: D W Forsyth, Y Ruan, T A Plank

1455h **T33B-06** A comprehensive portrait of the central Pacific lithosphere-asthenosphere system from NoMelt seafloor geophysical observations: J B Gaherty, J B Russell, H F Mark, P P Lin, E K Sarafian, Z Ma, D Lizaralde, J A Collins, G Hirth, R L Evans, C A Dalton

1510h **T33B-07** Evolution of Heat Flow, Hydrothermal Circulation and Permeability with Age on the Southern Flank of the Costa Rica Rift: K P Kolandaivelu, R N Harris, R P Lowell, A H Robinson, D J Wilson, R W Hobbs

1525h **T33B-08** The Green Dog That Did Not Bark: The Curious Incidence of Seismic Anisotropy Beneath Mid-Ocean Islands: J J Park, D M Rye
**T33C (CC) Hall A-C (Poster Hall)**

**Wednesday 1340h**

*(De)Cratonization Dynamics III Posters* (joint with DI, S, V)

**Presiding:** Klaus Gessner, Organization Not Listed; Liang Zhao, University of Chinese Academy of Sciences; Huaiyu Yuan, Macquarie University; Vadim Levin, Rutgers University;

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1340h **T33C-0406 POSTER** The Curious Case of Shear Waves Not Splitting: A Weakly Anisotropic Region Within the Superior Craton. **V L Levin, Y Li, X Chen**

1340h **T33C-0407 POSTER** Crustal anisotropy beneath Northeastern margin of Tibet Plateau from Receiver Functions. **Y Li, Z Xie, V L Levin, Q Wu**

1340h **T33C-0408 POSTER** Moho Depth of the Ordos Block in North China from Lithospheric-Mantle-Corrected Virtual Deep Seismic Sounding (VDSS). **T Liu, S L Klemperer**

1340h **T33C-0409 POSTER** Receiver Function Principal Component Analysis and Its Application to Study the Crustal Structure of Central Sichuan Basin, SW China. **J Zhang, L Chen, X WANG**

1340h **T33C-0411 POSTER** Upper mantle structure beneath the Korean Peninsula by teleseismic traveltime tomography. **J H Song, J Rhie, S Kim**

1340h **T33C-0412 POSTER** Spatial variations in crustal structure and shear wave velocity across the Canning Basin, NW Australia. **H Yuan, K Gessner, R Murdie, L Zhao**

1340h **T33C-0413 POSTER** Insights into changes in crust formation mechanisms across the Archean-Proterozoic Transition: Receiver function observations in the Caprorn Orogen, Western Australia. **H Yuan, R Murdie, M C Dentith, S Johnson, K Gessner, Y Lu**

1340h **T33C-0414 POSTER** Using Common Conversion Point Stacking to Explore Upper Mantle Seismic Discontinuities beneath the Wyoming Craton. **Y Wang, R Russo**

1340h **T33C-0415 POSTER** Crustal architecture of the composite East Antarctic craton between the Shackleton Range and Dronning Maud Land. **F Ferraccioli, B Pickard, G Eagles, R Forsberg, J Jacobs, T A Jordan, I W D Dalziel, K Matsuoka, M Ghidella**

1340h **T33C-0416 POSTER** Stability of cratons since early Phanerozoic. **J Paul, A Ghosh**

1340h **T33C-0417 POSTER** Evolution of lithospheric drip and its impact on the seismicity in the Central and Southeastern US. **A Saxena, E Choi, C A Powell**

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1340h **T33C-0418 POSTER** The numerical simulation for lithospheric mantle delamination triggered by oceanic plate subduction. **M Chen, X Shen, W Leng**

1340h **T33C-0420 POSTER** The Achankovil Shear Zone, Southern India: It's Extension into Madagascar. **P Praharaj, R S**

1340h **T33C-0421 POSTER** High-Grade Metamorphic Iron-Formation in the NW Wind River Mountains. **J A Nord**

1340h **T33C-0422 POSTER** Multiple phases of high-temperature metamorphism recorded in Archean continental crust: A record from polyphase garnet growth. **M J Caddick, B Dragovic, V Guevara**

1340h **T33C-0423 POSTER** Substantial Proterozoic Burial and Exhumation of the Kaapvaal Craton from (U-Th)/He Thermochronology and Implications for Cratonic Stability. **J S Baughman, R M Flowers**

1340h **T33C-0424 POSTER** Constraints on the Thermal Structure of the Mantle Beneath the Archean South-Central Kasai Block, Congo Craton and Adjacent Proterozoic Lithosphere, Central Africa. **P E Janney, B J Nkere, D I Demaiffe, D P Thierry**

1340h **T33C-0425 POSTER** BARscope - extending EarthScope Between the Appalachians and the Rockies. **S Stein, C A Stein, G R Keller, S Marshak, J B Hickman Jr, M Barklage, P Persaud, R D Hatcher Jr, R P Elling**

1340h **T33C-0426 POSTER** Isopycnicity of cratonic mantle restricted to kimberlite provinces. **I M Artemieva, H Thybo, Y Cherepanova**
1340h T33D-0429 POSTER Quantifying the role of off-fault plastic failure in reconciling differing geodetic and geologic slip rates along the San Andreas fault in the Santa Cruz Mountains, CA using thermochronology and finite element modeling: C W Baden, G E Hilley, D L Shuster, J K Hourigan


1340h T33D-0431 POSTER Reconciling Sinuosity Changes in Ancient Mississippi River Meanders in the Context of Late-Pleistocene and Holocene Active Faults: L K Carnes, M B Magnani, F J Pazzaglia

1340h T33D-0432 POSTER Modelling tectonics and seismicity due to slab retreat along the northern Apennines thrust belt: M D’Acquisto, L Dal Zilio, Y van Dinther, I Molinari, T Gerya, E H Kissling

1340h T33D-0433 POSTER Strain accumulation and historic earthquakes from the Main Kopet Dagh Fault, Turkmenistan.: N Dodds, R T Walker, C Gruetzneler, B Parsons

1340h T33D-0434 POSTER Development of Monitoring and Forecasting Methods for Crustal Activity Utilizing Large-Scale High-Fidelity Finite Element Simulations with 3D Heterogeneous Medium: T Horii, T Ichimura, K Fujita, T Yamaguchi, T Inuma, R Agata

1340h T33D-0435 POSTER Localized strain rate in Central and Northeast Japan before and after the Tohoku-Oki earthquake: T Inamatsu, Y Takada, T Sagiya, T Nishimura

1340h T33D-0436 POSTER Interseismic deformation along the southern Kurile trench – Reexamination of forearc sliver behavior and megathrust locking –: Y Itoh, T Nishimura, K Wang, J He, T Sun

1340h T33D-0437 POSTER Regional Coseismic and Postseismic Upper-crustal Deformation Deducd from \( V_p/V_s \) Changes after the 2011 Tohoku-Oki Megathrust Earthquake: J Kim, T K Hong

1340h T33D-0438 POSTER Quantitative determination of slip rate and tectonic transformation of the Tianjingshan fault of NE Tibet, China: X Li, C Li, P Zhang, W Zheng, J Dong, G Chen, M Ai, G Ren, Q Luo

1340h T33D-0439 POSTER Recent activity on the Main Boundary Thrust in western Nepal: implications for mechanics of the Himalayan thrust system: M Riesner, L Bollinger, J Hubbard, C Guérin, C Karakas, R V Almeida, K Bradley, S N Sapkota, P Tapponnier

1340h T33D-0440 POSTER Lessons from crustal responses to co- and inter-seismic stress disturbances: Y Takada, T Inamatsu, K Tsukahara, T Sagiya, T Nishimura

1340h T33D-0441 POSTER Deducing Crustal-scale Reverse-Fault Slip Distribution from Folded River Terraces, Qilian Shan, China: Y Wang, M E Oskin, Y Li

1340h T33D-0442 POSTER Middle Miocene reorganization of the Altyn Tagh fault system, northern Tibetan Plateau: L Wu, A Xiao, E Cowgill, H Zhao


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T33E  (CC) Hall A-C (Poster Hall)

Wednesday  1340h

Interplay Between Seismic and Aseismic Slip: Implications for Fault Physics IV Posters  
(joint with G, S)

Presiding: Valere Lambert, California Institute of Technology; Kathryn Materna, University of California Berkeley; Tomoaki Nishikawa, Disaster Prevention Research Institute, Kyoto University; Yohei Hamada, JAMSTEC;

1340h T33E-0444 POSTER Receiver function imaging around source region of slow earthquakes in western Shikoku, Japan by using a dense array: A Hikita, K Obara, A Kato, A Takeo, T Akuhara, T Maeda

1340h T33E-0445 POSTER Newly detected tremors in Puysegur and Marlborough fault system, New Zealand: P Romanet, S Ide

1340h T33E-0446 POSTER Spatiotemporal characteristic activities of slow earthquakes: Tremor migration beyond gaps: K Obara

1340h T33E-0447 POSTER Difference of source parameters between shallow and deep tremors: S Katakami, K Ohta, Y Ito

1340h T33E-0448 POSTER Spatio-temporal Variation of Seismic Energy Released by Shallow Low-frequency Tremors in the Hyuga-nada, SW Japan, revealed by Ocean Bottom Seismological Observation: S Watanabe, Y Yamashita, T Yamada, M Shinohara, T Matsushima

1340h T33E-0449 POSTER Dynamic Triggering of Low Frequency Tremor Unveiled by an OBS Array near the Japan Trench: S Ohyanagi, K Ohta, Y Ito, R Hino, Y Ohta, R Azuma, M Shinohara, K Mochizuki, T Sato, Y Murai
1340h T33E-0450 POSTER Low Frequency Earthquakes along the Ryukyu Islands Triggered by Teleseismic Earthquakes: A Kinjo, M Nakamura

1340h T33E-0451 POSTER Attempt to detect VLFE-like events in Tohoku-Oki using local short period OBS records: H Takahashi, R Hino, Y Ohta, N Uchida, S Suzuki, M Shinohara, T Matsuzawa

1340h T33E-0452 POSTER Seasonal to several-years-long changes in the tidal response to very low-frequency earthquakes in the Ryukyu Trench: M Nakamura

1340h T33E-0453 POSTER Detection of volcanic deep low frequency earthquakes and temporal variation of its activities in Japan: R Kurihara, K Obara, A Takeo

1340h T33E-0454 POSTER Recent Report on “Slow Earthquake Database”: Y Tanaka, M Kano, N Aso, T Matsuzawa, S Ide, K Obara

1340h T33E-0455 POSTER Detection of inland SSE based on GNSS baseline change around earthquake swarm area: M Ohzono, H Takahashi, M Ichiyanagi

1340h T33E-0456 POSTER An attempt to detect small crustal deformation associated with stress release caused by ETS in southwest Japan, using GNSS data: M Fujita, T Nishimura, S Miyazaki

1340h T33E-0457 POSTER A small slow slip event in Bungo Channel from December 2015 to March 2016 detected by a GNSS observation network: H Hirose, T Matsushima, T Tabei, T Nishimura

1340h T33E-0458 POSTER Slip distributions based on tilt change data for short-term slow slip events in western Shikoku, southwest Japan: W Tamura, T Kimura, H Hirose

1340h T33E-0459 POSTER Spatial features of deep low frequency tremors occurring during the L-SSE period in Tokai and Western-Shikoku, southwest Japan: K Nakamoto, Y Hiramoto, T Matsuzawa

1340h T33E-0460 POSTER Source fault model of the Slow Slip Event off the Boso Peninsula on 2018 based on tilt and GNSS data: H Kimura

1340h T33E-0461 POSTER Continuous tremor and low frequency earthquake (LFE) activity under the Aleutian Islands and their possible implications on subduction seismicity: A Ghosh, B LI

1340h T33E-0462 POSTER Classification of tremor and earthquake with neural network: N Mizuno, S Ide

1340h T33E-0463 POSTER Automatic classification of triggered tectonic tremor with deep learning: K Chao, P Seetharaman, V Tang, B A Pardo, S Van der Lee

1340h T33E-0464 POSTER Detection of very low frequency earthquakes off the Pacific coast of Tokachi and Tohoku regions, northeastern Japan: S Baba, A Takeo, K Obara, T Maeda, T Matsuzawa

1340h T33E-0465 POSTER Comparison between earthquake swarm activity and slow slip activity in the Ryukyu and Hikurangi Trenches: T Nishikawa, T Nishimura

1340h T33E-0466 POSTER Interplay between seismic and aseismic slip along subduction zone megathrusts: Insights from numerical modeling: D G Blank, J Morgan

1340h T33E-0467 POSTER Numerical simulation of slow slip events in the Hyuganada and Shikoku region: T Matsuzawa, B Shibazaki

T33F (CC) Hall A-C (Poster Hall)

Wednesday 1340h

Interplay Between Seismic and Aseismic Slip: Implications for Fault Physics V Posters (joint with G, S)

Presiding: Valere Lambert, California Institute of Technology; Kathryn Materna, University of California Berkeley; Tomoaki Nishikawa, Disaster Prevention Research Institute, Kyoto University; Yohei Hamada, JAMSTEC;

1340h T33F-0468 POSTER Quasi-static slow-slip cycle simulation based on finite element modeling: R Agata, T Hori, K Fujita, M Hyodo, T Ichimura

1340h T33F-0469 POSTER Broadband slow-earthquake scaling and statistics reproduced by diffusive ruptures on critically dense or tough patches: D Sato

1340h T33F-0470 POSTER EnKF Estimation of Frictional Properties and Slip Evolution on a LSSE Fault with a locked megathrust fault zone -Numerical Experiments:- K Hirahara, K Nishikiori

1340h T33F-0471 POSTER Seismic energy estimation of shallow slow earthquake: M Nakano, S Yabe, T Tonegawa

1340h T33F-0472 POSTER Does a focal region of shallow slow earthquake become a source area of tsunami? -Approach of geophysical and geological survey for a large historical earthquake:- Y Yamashita, Y Kase, K Ioki

1340h T33F-0473 POSTER Migrating slow slip transient prior to a shallow crustal earthquake: A Kato, T Igarashi

1340h T33F-0474 POSTER Quantitative relationship between slow slip migration speed and frictional properties: K Ariyoshi, J P Ampuero, R Burgmann, T Matsuzawa, A Hasegawa, R Hino, T Hori
1340h **T33F-0475** POSTER Frequent slow slip events and rapid postseismic slip attest to persistent aseismic fault areas delineating future seismic ruptures: **F Rolandon**, J M Nocquet, P A Mothes, P Jarrin, M Vallée, N Cubas, S Hernandez, M Plain, S Vaca, Y Font

1340h **T33F-0476** POSTER New Insight Into the Seismicity of the Western Alps from Automated Analysis of Dense Linear Array Data: **E Beauce**, W B Frank, A Paul, M Campillo, R D van der Hilst

1340h **T33F-0477** POSTER Probing fault frictional properties during afterslip up- and down-dip of the 2017 Mw 7.3 Iran-Iraq earthquake: **K Wang**, R Burgmann


1340h **T33F-0479** POSTER Characterization of slip pulses within the upper Cook Inlet 2008 - 2013 slow slip event in Alaska: **B Rousset**, Y Fu, R Burgmann

1340h **T33F-0480** POSTER The Full spectrum of the response of Low Frequency Earthquakes to periodic stresses near Parkfield, California: **L Xue**, R Burgmann, D R Shelly

1340h **T33F-0481** POSTER Aseismic Slip Histories Inferred from Sequences of Small Repeating Earthquakes beneath the Boso Peninsula, Central Japan: **T Igarashi**

1340h **T33F-0482** POSTER Slip Behaviors on an Artificial Fault Surface with Engraved Topography in a Laboratory Stick-Slip Experiment: Insights on the Roles of Fault Roughness in Spatial and Temporal Seismic Distribution: **C Gu**, G A Prieto, U Mok, J B Evans

1340h **T33F-0483** POSTER Repeating Aftershocks Following the 2013 Mw 6.6 Lushan Earthquake: **H Schumann**, D Yao, J Wu, Z Peng

1340h **T33F-0484** POSTER Interplate Locking and Dissipation of Viscoelastic Postseismic Displacement of the 1960 Valdivia, Chile, Earthquake: **B A Ambrosius**, R M Russo, V I Mocanu, K Wang

1340h **T33F-0485** POSTER Rate and extent of shallow interseismic slip and a recent Mw 6.5 earthquake on the creeping segment of the Philippine Fault: **J D B Dianala**, R Jolivet, M Y Thomas, B Parsons, R T Walker

1340h **T33F-0486** POSTER Exploration of the Seismic Cycle of the Ometepec/Pinotepa Region in Oaxaca, Mexico: **L A Dominguez Ramirez**, T Taira, B Duan, B Luo

1340h **T33F-0487** POSTER Using Dynamic Earthquake-Cycle Models to Explore Interactions Between Slow-slip Events and Megathrust Earthquakes Along Subduction Zones: **B Duan**, B Luo, L A Dominguez

1340h **T33F-0488** POSTER Explore the Effect of Heterogeneities of Fault Zone Properties on Seismic and Aseismic Slip on Oceanic Transform Faults Using Rate-and-state Friction: **P Shi**, M Wei, Y Liu

1340h **T33F-0489** POSTER The influence of pore pressure on the effective friction coefficient during the calculation of Coulomb failure stress: **H Cheng**, H Zhang, Y Shi

1340h **T33F-0490** POSTER Temporal changes of Group Velocity of Empirical Green’s Function from Ambient Seismic Noise Correlation Associated with Two Major Earthquakes in Korean Peninsula: **W D Lee**, Y S Jang

1340h **T33F-0491** POSTER A COMPARISON OF SOME METHODS FOR PALEOSTRESS ESTIMATION FROM FAULT-SLIP OBSERVATIONS: **D C Srivastava**, K Bhatnagar, P K Gupta

### T33G  (CC) Hall A-C (Poster Hall)

**Wednesday  1340h**

**Shaping Slow and Ultraslow Spreading Seafloor with Faults, Magma, and Fluids II Posters (joint with OS)**

**Presiding:** Manon Bickert, Institut de Physique du Globe de Paris; Luc Lavier, University of Texas at Austin; Jean-Arthur Olive, Ecole Normale Supérieure Paris/CNRS;


1340h **T33G-0495** POSTER Modeling interactions between plate-boundary forces and evolving resistance at mid-ocean ridges as the origin of non-uniform seafloor growth: **H Choi**, E Choi, R Reece

1340h **T33G-0496** POSTER Mapping Tectonic Features Along and Across Axis at the Mid-Atlantic Ridge at 14N: **G M Lucia**, V D Wanless, S A Soule, E L Mittelstaedt, M D Kurz
Connections between changing axial magma flux and oceanic core complex formation along the Marathon Fracture Zone, Mid-Atlantic Ridge at ~12°N: D King, E L Mittelstaedt, V D Wanless, M D Kurz, S A Soule, D J Fornari, F Klein

Time-variable strength of axial lithosphere at slow-spreading ridges and the lifespan of oceanic core complexes: H Lu, E Choi

How to make detachment faults at melt-starved mid-ocean ridges that have a very thick axial lithosphere?: M Bickert, L Lavier, M Cannat, A Tommasi, S Jammes

No evidence of progressive serpentinization at slow-slip oceanic transform faults: Geophysical constraints from the Vema Transform, Central Atlantic: M Cargo, M Ligi, E Bonatti

Long-Term Evolution of Non-Transform Discontinuities at the Mid-Atlantic Ridge, 24°N - 27°30′N and 0 – 25 Ma: T Zheng, B E Tucholke, J Lin

Serpentinized mantle exhumation versus magmatic accretion at ultraslow spreading rates: constraints from seismic data and Vp/Vs ratios, Mid-Cayman Spreading Centre, Caribbean Sea: N W Hayman, I Grevemeyer, C Peirce, M Schwartd, H J Van Avendonk, A Dannowski, C A Papenberg

Influence of fault zones on the self-organization of hydrothermal outflow and recharge: Constraints from analog experiments: E L Mittelstaedt, J A Olive, T Barreyre

Distribution of major and trace elements in sediments from the hydrothermal fields in the mid-west Indian Ocean: H Li, Y Huang, X Lv, X Yue, Y Wang

Along-Axis Lower Crustal Magmatic Flow In The Neotethyan Spreading System: A Morris, M W Anderson, A F Omer, O Parlak


Analysis of Hydrothermal Alteration in Abyssal Peridotites from the Gakkel Ridge: S Patterson, K J Lynn, C Prigent, J M Warren

Petrogenesis of non-popping rock lavas at 14°N on the Mid-Atlantic Ridge: A R Schweitzer, V D Wanless, E E McCully, M D Kurz, E L Mittelstaedt, S A Soule


The 2018 Eruptions of Kīlauea Volcano, Hawaii, and Fernandina and Sierra Negra Volcanoes, Galápagos IV Poster (joint with GH, IN, S, T)

Presiding: Ingrid Johanson, USGS; Matthew Patrick, USGS; Gregory Waite, Michigan Technological University; Claire Horwell, Durham University;

The 26th June 2018 eruption at Sierra Negra volcano, Galapagos archipelago: early results on seismic tremor and low frequency seismicity from a temporary network: K L Li, C J Bean, A F Bell, S Hernandez, M Möllhoff, M C Ruiz, S J C Oliva, C Ebinger

Dynamic earthquake triggering promoted by system criticality at Sierra Negra volcano, Galapagos Islands: P C La Femina, A F Bell, S Hernandez, J McCloskey, M C Ruiz, C J Bean, M Möllhoff

Full moment tensors of caldera earthquakes during the 2018 eruption of Sierra Negra, Galápagos: S J C Oliva, M C Ruiz, C J Bean, I Lokmer, A F Bell, C Ebinger, S Hernandez, P C La Femina, G Ruiz

The inevitable control of Earth’s deep interior on the surface: C R Lithgow-Bertelloni

1615h T34A-01 The inevitable control of Earth’s deep interior on the surface: C R Lithgow-Bertelloni

1700h Q & A:
**V34C  (MM) Liberty M**

**Wednesday  1600h**

**Upper Crust Evolution: Models of Formation and Composition I © (joint with S, T)**

_Presiding: Scott Wipperfurth,_ University of Maryland College Park; _Jill VanTongeren_, Rutgers University New Brunswick; _C. Keller_, Berkeley Geochronology Center; _Oliver Jagoutz_, Massachusetts Institute of Technology;

1600h  **V34C-01**  4.1 Ga zircon grains from the Barberton greenstone belt: New constraints on the Hadean crust: _N Drabon_, G R Byerly, B L Byerly, D R Lowe

1615h  **V34C-02**  Hadean geodynamics and its implications for the nature of early crust: _J Korenaga_

1630h  **V34C-03**  Striking Similarities and Subtle Differences Across the Hadean-Archean Boundary: Model Melt Insight into the Early Earth Using New Zircon/Melt Kds: _T L Carley_, E A Bell, C F Miller, L L Claiborne, M Harrison

1645h  **V34C-04**  Neoarchean Ferroan Granitoids and Link to Magnesian Granitoids, North China Craton: Implications for Late Archean Granitoid Diversification: _W Wang_, S Liu, P A Cawood, M Wang, R Guo

1700h  **V34C-05**  Secular evolution of mass transfer across the Moho - implications for evolution of the continental crust: _G M Bybee_, S E Zhang, A M Roman

1715h  **V34C-06**  Evidence for an underplated island arc as the source of a continental arc monzonite: _E Gammel_, P I Nabelek

1730h  **V34C-07**  Nishinoshima Volcano in the Ogasawara (Bonin) Arc: New Continent from the Ocean?: _Y Tamura_, O Ishizuka, T Sato, A R Nichols

1745h  **V34C-08**  Polybaric crystallization of hydrous basalts in a continental arc: evidence from Hidden Lakes mafic complex, Sierra Nevada batholith, California: _M J Lewis_, C E Bucholz, O E Jagoutz
Session Information

Oral Sessions
Sessions are being held in the Convention Center (CC) and Marriott Marquis (MM)

Poster Sessions
Posters are on display in the following venue throughout the week: Hall A-C (Poster Hall)

Session & Paper Numbering

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation. Example: A21A-01 = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

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The program is current as of 06 December 2018. An omitted abstract ID number in the presentation order indicates that the abstract has been withdrawn by the presenter from the session. Please refer to the online program at https://agu.confex.com/agu/fm18/meetingapp.cgi/Home for updates.

Thursday A.M.

S41D  (CC) Hall A-C (Poster Hall)
Thursday 0800h

Beyond the Earthquake Cycle: Field and Modeling Constraints of Earthquake Rupture Along Complex-Geometry Fault Systems and Implications for Seismic Hazard Assessment

Posters (joint with NH, T)

Presiding: Olaf Zielke, KAUST; Oona Scotti, IRSN Institut de Radioprotection et de Sûreté Nucléaire; Paul Mai, Division of Physical Sciences & Engineering; Laura Peruzza, National Institute of Oceanography and Applied Geophysics OGS;
0800h  **S41D-0556 POSTER**  A teleseismic finite-fault rupture analysis of the May 21, 2014 Bay of Bengal earthquake (Mw 6.1) and its tectonic implications.: P Kumara, W K Mohanty

0800h  **S41D-0557 POSTER**  Anatomy of the 2017 Ayvacık Earthquake Sequence (NW Turkey) identified by seismicity and InSAR: Seismo-geodetic evolution of a listric fault: F Bulut, E Havazli, C Yaltirak, A Dogru, H Ozener

0800h  **S41D-0558 POSTER**  Rupture Process Joint Inversion of the 2017 Ms6.6 Jinghe Earthquake, Based on 3-D Grid Search Processes for the Hypocentral Depth and Fault Plane Parameters: P Wang, Y Zhang, W Feng

0800h  **S41D-0559 POSTER**  Integrating seismic source inversion, hypocenter relocation, and geodetic data to resolve the source of the Mw 6.1 earthquake near Fariman, Iran on 5 April 2017: D Graybeal, F Deng, S K Hosseini, J Braunmiller, T H Dixon

0800h  **S41D-0560 POSTER**  Fault Interactions and Synchronization: Insight from the 1936-1997 NE Lut, Iran, Earthquake Sequence: M Marchandon, M Vergnolle, O Cavalie

0800h  **S41D-0561 POSTER**  Seismic source characterization of faults in the Portland and Tualatin Basins and a paleoseismic study of the Gales Creek Fault, OR: A E Horst, A R Streig, R E Wells

0800h  **S41D-0562 POSTER**  Analysis of corner frequencies and high-frequency components of seismic waves at near field based on rupture dynamics of complex faults: J Cheng, F Hu, X Chen

0800h  **S41D-0563 POSTER**  Dynamic rupture transfer from reverse to strike-slip faults: FDP-BIEM simulation of the 2018, Mw5.5, northern Osaka, Japan, earthquake: R Ando, K Imanishi, T Uchide

0800h  **S41D-0564 POSTER**  Physics-based Simulator of Short- and Long-Term Seismicity: application to the Central Apennines Region: M Murru, R Carlucco, R Console, G Falcone, M Taroni, P Vannoli

0800h  **S41D-0565 POSTER**  Earthquake Scenarios Determined from Dynamic Rupture Simulations on the Xiaojiang Fault System, Yunnan, China: H Yu, Z Zhang, W Zhang, X Chen

0800h  **S41D-0566 POSTER**  Effects of geometry and stress field on dynamic ruptures by 3D numerical simulation of BIEM with unstructured meshes: F Qian, X Feng, B Wu, H Zhang

0800h  **S41D-0567 POSTER**  Stress-Field and Yielding Around Faults with Multiscale Roughness: A Sagy, V Lyakhovsky

0800h  **S41D-0568 POSTER**  What is the effect of asymmetric topography on rupture propagation across the Cajon pass?: C Kyriakopoulos, D D Oglesby, B Wu, G Funning

0800h  **S41D-0569 POSTER**  Probabilities of Earthquakes in the San Andreas Fault System: Estimations from RSQSim Simulations: J J Gilchrist, T H Jordan, K R Milner

0800h  **S41D-0570 POSTER**  Earthquake cycle modeling of curvilinear non-planar faults: 1992, Landers earthquake sequence.: P Galvez, D B Peter, P M Mai

0800h  **S41D-0571 POSTER**  What Stops Earthquake Rupture?: D D Jackson

0800h  **S41D-0572 POSTER**  Magnitude-Frequency Distribution of Simulated Earthquake Cycles in Damaged Fault Zones: P Thakur, Y Huang

0800h  **S41D-0573 POSTER**  Earthquake cycling simulations by a Curved Grid Finite Difference Method: W Zhang, F Hu, Z Zhang, X Chen

0800h  **S41D-0574 POSTER**  Three-dimensional modeling of megathrust earthquakes on a subduction fault plane with large-scale geometrical complexity: B Luo, B Duan

0800h  **S41D-0575 POSTER**  A Semi-automated Method for Rapid, Bulk Fault Displacement Analysis: F D Wolfe, T A Stahl, P Villamor, B Lukovic

0800h  **S41D-0576 POSTER**  Recent Paleoseismic and Tectonic Geomorphic Studies of the Meers Fault, Oklahoma: A R Streig, S E K Bennett, K T Hornsby, J C Chang, S Mahan

0800h  **S41D-0577 POSTER**  Magnitude of the 1920 Haiyuan (China) Earthquake Re-estimated Using a Combined Geological and Seismological Approach: Q Ou, J Yu, G Kulikova, B Parsons, R T Walker

0800h  **S41D-0578 POSTER**  Correlating long-term uplift pattern with single earthquake rupture of a sub-parallel fault system based on stream profile analysis: An example from the 2016 Kumamoto, Japan, earthquake rupture zone: N Takahashi

0800h  **S41D-0579 POSTER**  Submarine expression of the earthquake cycle: morphotectonics analysis of the normal Roseau fault (Lesser Antilles, France) from high resolution bathymetry and 3D photogrammetric models to reconstruct its slip history: J Billant, F Leclerc, J Escarit, N Gracias, K Istenic, A Arnaubec, F Nathalie, C Deplus
0800h S41D-0580 POSTER Deformation On Parallel Fault Strands Associated With The Fault Tip Zone Of The South Alkyonides Normal Fault, Greece, Quantified Using Combined $^{36}$Cl Exposure Dating Of Wave-Cut Platforms, $^{234}$U/$^{230}$Th Coral Dating, And Detailed Mapping.: J Robertson, G Roberts, F Iezzi, M Meschis, D M Gheorghiu


0800h S41D-0582 POSTER 3D-Geological Model of the Superficial Faults Reactivated During the 2016 Central Italy Seismic Sequence: T Volatili, T Emanuele, G Pasquini, P P Pierantoni, R Teloni, M Zambrano

0800h S41D-0583 POSTER Coseismic Throw Variation Across Along-Strike Bends on Active Normal Faults: Implications for Displacement/Length Scaling of Earthquake Ruptures.: F Iezzi, Z K Milden, J Faure Walker, G Roberts, H Goodall, M Wilkinson, J Robertson

0800h S41D-0584 POSTER The distribution of slip on the Hebron Fault, Namibia: Implications for earthquakes in stable continental regions.: A Sloan, G Salomon, R L Kahle, B Shaw-Kahle

0800h S41D-0585 POSTER Relationship between $V_{s30}$ and fault displacement attenuation relation of PFDHA: N Inoue, N Kitada, T Takahama, M Tonagi

0800h S41D-0586 POSTER Challenges Facing Fault-based PSHA – The FAULT2SHA ESC WG strategy: O Scotti, L Peruzza

0800h S41D-0587 POSTER Seismic hazard estimation based on active faults data for Georgia (Sakartvelo): N S Tsereteli, O Varazanashvili, Z Gogoladze


0800h S41D-0589 POSTER Probabilistic tsunami hazard analysis of the southern Pacific coast of Mexico: E F Salazar Monroy, D D Melgar, L Ramirez-Guzman

T41A (MM) Liberty L

Thursday 0800h

(De)Cratonization Dynamics I (joint with DI, S, V)

Presiding: Klaus Gessner, Organization Not Listed; Liang Zhao, University of Chinese Academy of Sciences; Huaiyu Yuan, Macquarie University; Vadim Levin, Rutgers University;

0800h T41A-01 Origin, preservation and destruction of cratons: C T Lee

0815h T41A-02 Sulfur isotopes of sulfide inclusions in diamonds: a tool to unravel craton geodynamics: K Smit, E H Hauri, S B Shirey, J Wang

0830h T41A-03 Temporal coupling of crustal and continental lithospheric mantle growth with implications for the spatial distribution of giant mineral deposits: K Czarnota, D C Champion, M J Hoggard, F D Richards, D Huston, R Skirrow, M Doublier, A Gorbatov, J Duan

0845h T41A-04 On the density structure and long-term stability of cratonic lithosphere: L Liu, J Hu, Y Wang

0900h T41A-05 Mantle dynamics and seismic structure at the boundary between the southern Canadian Cordillera and North America Craton: C A Currie, D Mallyon, Y Chen, A J Schaeffer, P Audet, Y J Gu

0915h T41A-06 Integrating magnetotelluric and seismic images at the contact between the Borborema Province and the São Francisco craton (NE Brazil). Where is the craton’s northern boundary?: J Julià, X Garcia, A M Nemocon, F L Simões Neto

0930h T41A-07 Understanding the Origins of the Mid-Lithospheric Discontinuities in the Kalahari Craton: H E Krueger, K M Fischer, Z Eilon

0945h T41A-08 Crustal and Uppermost Mantle Structure of the Alpine Region Unraveled by Transdimensional Inversion of Receiver Functions and Surface Wave Dispersion Data: L Zhao, H Yuan, M G Malusa’, G Lu, A Paul, Y LU, T Bodin

T41B (MM) Liberty N-P

Thursday 0800h

Interplay Between Seismic and Aseismic Slip: Implications for Fault Physics I (joint with G, S)

Presiding: Valere Lambert, California Institute of Technology; Kathryn Materna, University of California Berkeley; Tomoaki Nishikawa, Disaster Prevention Research Institute, Kyoto University; Yohei Hamada, JAMSTEC;
0800h **T41B-01** Very Low Frequency Earthquakes (VLFEs) between episodic tremor and slip (ETS) events in Cascadia: A Ghosh, A A Hutchison

0815h **T41B-02** Induced Stresses on the Cascadia Megathrust during ETS Events and Implications for the Triggering of Tremor: K Hall, D A Schmidt, H Houston

0830h **T41B-03** Low-frequency earthquakes describe the slow slip that drives them: W B Frank, E E Brodsky

0845h **T41B-04** Event size distribution of shallow tectonic tremor in the Nankai trough: M Nakano, S Yabe, H Sugioka, S Ide

0900h **T41B-05** Frequent activity of shallow tectonic tremors in the southern margin of the 2011 Tohoku-Oki earthquake rupture area: K Ohta, Y Ito, S Ohyanagi, R Hino, Y Ohta, R Azuma, M Shinohara, K Mochizuki, T Sato, Y Murai

0915h **T41B-06** What does a tremorgenic rock look like?: J D Kirkpatrick, A Fagereng

0930h **T41B-07** Investigate episodic tremor and slow slip variability due to stress variation: Y Luo, Z Liu

0945h **T41B-08** What are Low-Frequency “Earthquakes?”: A M Rubin, M G Bostock

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**T41D (CC) Hall A-C (Poster Hall)**

**Thursday 0800h**

**Chronologic Constraints on the Processes and Tempos of Orogenesis Archived in Sedimentary Basins II Posters**

*Presiding: Andrea Stevens Goddard, Rowan University; Ryan Leary, New Mexico Institute of Mining and Technology; Adam Forte, Louisiana State University;*


0800h **T41D-0329** POSTER Detrital Zircon Geo- and Thermochronologic Constraints on the Timing, Pace, and Drivers of Exhumation in the Hinterland of the North American Cordillera: T S Bidgoli, K A Graham, A Möller, D F Stockli, J D Walker

0800h **T41D-0330** POSTER Tracking regional sediment dispersal in the late Paleozoic Ancestral Rocky Mountain system using detrital zircon: R. Leary, P J Umhoefer, M E Smith, N Riggs, E Lodes, G Burr, D Foley

0800h **T41D-0331** POSTER Reconstructing Miocene Paleogeography of the Middlelegate and Eastgate Basins, NV through Geologic Mapping and Sedimentary Provenance Analysis: I Bristol, J C Fosdick, J P Colgan
0800h T41D-0332 POSTER Unravelling complicated basin thermal histories from apatite and zircon (U-Th)/He systematics: An example from the Drummond Basin, Queensland (Australia): K K Min, W Zhang, S E Bryan, D A Foster, C R Fielding, C Allen

0800h T41D-0334 POSTER Composition, structure and tectonic setting of the Southern Kangurtag accretionary complex in Eastern Tianshan, NW China: Implication for accretionary process of Central Asian Orogenic Belt: Z Chen, W Xiao, B F Windley, K Schulmann, Q Mao, J Zhang, Z Zhang, C Deng, S Song

0800h T41D-0336 POSTER Detrital Zircon U-Pb and Hf Isotope Evidence from the Early Neoproterozoic Successions in the Central-Western Korean Peninsula: Implications for the Precambrian Tectonic History of East Asia: D L Cho, S W Kim

0800h T41D-0337 POSTER The structure and composition of the Middle Paleozoic Armovka nappe of the Fore Range of the Greater Caucasus and their relationship with the underlying rocks of the Precambrian basement: A Latyshev, V Kamzolkin, Y Vidjapin, S Ivanov, A Smulskaya, M Somin

0800h T41D-0338 POSTER Early Oligocene exhumation and syn-collisional volcanism in the Central Alps as revealed by combined FT and U-Pb analysis of detrital zircons in the Northern Alpine Foreland Basin: G Lu, M G Fellin, W Winkler, S Willett, M Guillong

0800h T41D-0339 POSTER Hinterland basin evolution of Cuenca Basin, Ecuador: Insights into the Miocene basin and magmatic evolution of the Northern Andes: S W M George, B K Horton, C Vallejo

0800h T41D-0340 POSTER Early Miocene Mafic Arc Volcanism of the Patagonian Andes Revealed with Detrital Multi-Chronometer and Trace Element Geochemistry from the Magallanes Basin 50-52°S: R A VanderLeest, J C Fosdick, J S Leonard, L E Morgan

0800h T41D-0341 POSTER Evaluating the Effects of Orogenic Exhumation and Sediment Transfer in Foreland Basin Development: A 4D Perspective from the Southern Patagonian Andes: A Stevens Goddard, J C Fosdick, M Calderón, M Ghiglione, B Romans, S N Thomson

0800h T41E-0342 POSTER Structural and kinematic analyses across the Dinarides Mountains of Central Europe: inferences on the thermal evolution and fluid-flow processes: M van Unen, L Matenoco, F H Nader, R Darnault


0800h T41E-0345 POSTER MIO-PLIOCENE ANDean OROGENIC RECORD FROM A FORE-ARC TO FORELAND TRANSECT IN SOUTHERNMOST COLOMBIA: A Cardona, M J Sanín, J S Jaramillo, G Monsalve, V Valencia, S Echeverri, S Hincapie, S Leon

0800h T41E-0346 POSTER How and When Did the Johannesburg Dome Form?: J Lehmann, R J Ormond

0800h T41E-0347 POSTER Structural Simulation of Fold-thrust Belt in Northwestern Taiwan through Distinct Element Method: Y J Chen, W J Huang, K Y Lai

0800h T41E-0349 POSTER Interplay Between Deformation and Proximal Foreland Sedimentation in the Late Cretaceous Sevier Orogenic Belt: E J Pujols, D F Stockli, K N Constenius, B K Horton

0800h T41E-0350 POSTER Miocene evolution of the frontal N Carpathians – lateral variations of foredeep basin development related to lateral variations of the structure of the lower plate: P Krzywiec

0800h T41E-0352 POSTER Conglomerate Recycling in the Himalayan Foreland Basin; Implications for River Dynamics: H D Sinclair, L A Quick, M Atral, E Dingle

0800h T41E-0353 POSTER Lateral variability of Cenozoic strata in the Ganga foreland basin of Nepal controlled by Indian basement cross-strike faults: J W F Waldron, M J Duvall, L Godin, Y Najman
0800h **T41E-0354 POSTER** New Detrital Zircon Analytical Techniques: Insights from the Sevier Foreland Basin System and the Salt Wash Member of the Jurassic Morrison Formation. **T J Tenpenny**, M D Blum


0800h **T41E-0356 POSTER** $^{40}\text{Ar}/^{39}\text{Ar}$ ages of muscovite from the Appalachian hinterland and foreland basin. **W Hames**, A Uddin, M Moore, J Thompson, J C Pashin

0800h **T41E-0357 POSTER** Constraints on sediment dispersal and provenance based on muscovite $^{40}\text{Ar}/^{39}\text{Ar}$ ages of the Late Mississippian Stanley Group to Middle Pennsylvanian Krebs Group, Arkoma-Ouachita Basin, Southeast Oklahoma. **J Thompson**, W E Hames, H E Johnson II

0800h **T41E-0358 POSTER** Detrital history of Cenozoic sequences of the Eastern Himalayan Foredeep: Source-to-sink geochronologic and petrofacies constraints on the Assam-Bengal system. **A Uddin**, S A Bowring, W Hames, J N Sarma

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**T41F (CC) Hall A-C (Poster Hall)**

**Thursday 0800h**

**Seafloor Geodesy: Measuring Deformation of the Seabed II Posters 📌**

*Presiding: Martin Heesemann*, Ocean Networks Canada; *Kelin Wang*, Geological Survey of Canada; *Yusaku Ohta*, Tohoku University; *Matthew Cook*, University of California, San Diego;

0800h **T41F-0359 POSTER** Northern Cascadia Subduction Zone Observatory. **M Heesemann**, K Wang, C D Chadwell, E Davis, K Moran, E Nissen, M Scherwath, Y Jiang

0800h **T41F-0360 POSTER** Development of seafloor real-time geodetic observatories in the Nankai Trough seismogenic zone for slow slip event detection. **E Araki**, T Kimura, Y Machida, M A Zumberge, S Kodaira

0800h **T41F-0361 POSTER** Experiment of acoustic ranging from GNSS buoy for continuous seafloor crustal deformation measurement. **K Tadokoro**, N Kinugasa, T Kato, Y Terada

0800h **T41F-0362 POSTER** Development of analysis method for ocean bottom crustal deformation by continuous observation using marine GNSS buoy. **N Kinugasa**, K Tadokoro, Y Terada, T Kato, A Futamura

0800h **T41F-0363 POSTER** Effect of tidal internal wave on GNSS-Acoustic positioning. **M Kido**, R Matsui

0800h **T41F-0364 POSTER** The Underwater Precise Positioning Strategy of the combined GNSS and acoustic technology. **Y Liu**, G Chen, Y Liu, W Zhang

0800h **T41F-0365 POSTER** Multiparameter techniques for seafloor vertical deformation assessment in the Campi Flegrei volcanic area. **G Iannaccone**, S Guardato, G P Donnarumma, P De Martino, F Chierici, A La Rocca, G Macedonio, L Beranzoli

0800h **T41F-0366 POSTER** Ground motion and its ocean bottom amplification in subduction zones. **Y Ito**, Y Kaneko, S C Webb, L M Wallace, R Hino

0800h **T41F-0367 POSTER** APT: An easily deployed low-power tool for measuring acceleration, pressure, and temperature with wide dynamic range and bandwidth. **J Farrugia**, E E Davis, M Heesemann, G Johnson, J M Paros, J M Leconte, S Coleman


0800h **T41F-0369 POSTER** Reducing ‘Noise’ in Ocean Bottom Pressure Measurements in the Cascadia Subduction Zone. **B He**, D R Watts, K L Tracey, K A Donohue, M Wei

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**T41G (CC) Hall A-C (Poster Hall)**

**Thursday 0800h**

**Shallow Subduction Zone Structure and Dynamics III Posters 📌 (joint with G, S, V)**

*Presiding: Hongfeng Yang*, Chinese University of Hong Kong; *Yan Hu*, USTC University of Science and Technology of China; *Shuichi Kodaira*, Yokohama National University; *Douglas Wiens*, Washington University in St Louis;

0800h **T41G-0370 POSTER** Seismicity monitoring around the plate subduction boundary in the Suruga Trough, western flank of the Izu Collision Zone, Japan, using Ocean Bottom Seismographs. **H Baba**, M Shinohara, K Tsuruga, T Nishiiimiya, K Nakata, Y Sawada, K Kasahara, Y Panayotopoulos, S Abe, T Sotani, N Nakao

0800h **T41G-0371 POSTER** Seismic refraction velocity structure in the vicinity of the Suruga Trough axial region revealed by OBS observations. **N Nakao**, H Baba, K Imamura, K Tsuruga, Y Sekino, T Hayashi, T Aikawa, K Nakata, T Nishiiimiya, Y Sawada, K Kasahara, Y Panayotopoulos, S Abe, H Sato
0800h **T41G-0372 POSTER** Shallow subduction zone structures of Suruga Trough, central Japan, by means of 2-D seismic reflection and refraction surveys by Tokyo University of Marine Science and Technology: **K Tsuruga**, Y Sekino, T Hayashi, H Baba, H Sato, R Hagita, T Aikawa, H Kondo, C Aoyama, J Kanda

0800h **T41G-0373 POSTER** Seismic structure of the off Fukushima, southern Japan Trench region: **K Nakahigashi**, T Sato, G Fujie, T Takahashi, S Miura, S Kodaira

0800h **T41G-0374 POSTER** Subduction geometry and seismic structure around northern Ryukyu subduction zone: **Y Yamamoto**, T Takahashi, Y Ishihara, K Obana, S Miura, S Kodaira, Y Kaneda

0800h **T41G-0375 POSTER** Anisotropic Feature Within the Oceanic Crust and its Relationship with Low-Frequency Earthquake Activity Beneath Western Shikoku, Southwest Japan: **K Shiomi**, T Takeda, T Ueno

0800h **T41G-0376 POSTER** Plate boundary geometry resulting from lithospheric tearing at active STEPs: an analogue model approach: **T Broerse**, R M A Govers, D Sokoutis, E Willingshofer

0800h **T41G-0377 POSTER** How Shallowing Slab Dip Could Produce Extensional Upper Plate Earthquakes after a Megathrust Earthquake?: **W R Buck**, B Oryan

0800h **T41G-0378 POSTER** Vertical tectonic stress of the Lithosphere revealed by dense gravity observations around the Tsangpo Gorge, Tibet of China: **G Fu**

0800h **T41G-0379 POSTER** Geologic History of the New Caledonia Trough from Potential Fields Modeling and Tectonic Reconstruction: **C Richardson**, C M Burberry, I Filipina

0800h **T41G-0380 POSTER** Tectonic Partitioning at Poorly-Coupled subduction zones: the Example of the Northern Lesser Antilles Margin.: **M Lairencin**, B Marcaillou, M Boucard, F Klingenhoefer, J F Lebrun, M Laigle, D Graindorge

0800h **T41G-0381 POSTER** Variations in Plate Curvature of the Incoming Lithosphere at the Japan Trench and Seismicity at the Trench Outer Slope: **E S M Garcia**, Y Ito

0800h **T41G-0382 POSTER** Origin of fluids involved in paleo-plate-boundary décollement in the Kodiak accretionary complex: **T Ishikawa**, A Yamaguchi

0800h **T41G-0383 POSTER** Delimitation of segments of the Nazca and Caribbean Plates beneath Colombia using P-wave travel time residuals.: **G Posada**, G Monsalve, A Cardona

0800h **T41G-0384 POSTER** Both Upper and Lower Plates Controlled the Great 2011 Tohoku-oki Earthquake: **D Zhao**, X Liu

0800h **T41G-0385 POSTER** Deformation of the oceanic asthenosphere and mantle wedge following the 2010 Mw 8.8 Maule earthquake: **Q Qiu**, J R Weiss, S Barbot, J H Foster, T J Wright, A Saunders, M G Bevis, R Smalley Jr, S Cimbaro, L E Lenzano, J Barón, J C Baer Sr, A Echalar, J Averey

0800h **T41G-0386 POSTER** Crustal Magmatism and Deformation Fabrics in Northeastern Japan Constrained by Ambient Seismic Noise: **K X Chen**, Y Gung, B Y Kuo, T Y Huang

0800h **T41G-0387 POSTER** A Decade of Seismicity in the Shallow Subduction Zone of Nicaragua-Costa Rica: **A Aguilar**, M Denolle, G A Prieto, H DeShon

0800h **T41G-0388 POSTER** Using Receiver Functions to Understand a Seismic Anomaly in Central Chile: **E Chaves**, J Domíno, A Nikulin

0800h **T41G-0389 POSTER** Under-thrusting sediment velocity structure and its tectonic implications in the southernmost Ryukyu subduction system: **C F Kao**, Y C Yeh, J Y Lin, S K Hsu

0800h **T41G-0390 POSTER** 3D velocity model and receiver functions highlight forearc deformation induced by subducting bathymetric features (Central Vanuatu): **O Foix**, W C Crawford, I Koulakov, M M Regnier, A Galve, C Baillard, B Pelletier, E Garaebiti

0800h **T41G-0391 POSTER** Analysis of the tectonic deformations in the Japanese island arc following the 2011 Tohoku earthquake based on satellite geodetic data: **G M Steblov**, I S Vladimirova, Y V Gabsatarov, L I Lobkovsky

0800h **T41G-0392 POSTER** Analysis of postseismic deformations after the 2010 Maule earthquake based on GPS data: **G M Steblov**, Y V Gabsatarov, I S Vladimirova, L I Lobkovsky

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**T41H (CC) Hall A-C (Poster Hall)**

**Thursday 0800h**

Shallow Subduction Zone Structure and Dynamics IV Posters (joint with G, S, V)

Presiding: **Hongfeng Yang**, Chinese University of Hong Kong; **Yan Hu**, USTC University of Science and Technology of China; **Shuichi Kodaira**, Yokohama National University; **Douglas Wiens**, Washington University in St Louis;
0800h **T41H-0393 POSTER** Assessing the Generation of the 1964 Great Alaska Earthquake in Terms of the Dynamics of a Fore-arc Sliver System: **K L Haynie, M A Jadamec**

0800h **T41H-0394 POSTER** Model of Viscoelastic Relaxation of Shallow Crustal Material for Seismically Induced Tension Cracks in the Chile-Peru Forearc: **H Luo, K Wang, J He**

0800h **T41H-0395 POSTER** Reveal of the pre-seismic phase of the seismic cycle from space geodetic observations over the area of Tohoku earthquake 2011: **G M Steblou, I A Sdelnikova, L I Lobkovsky**

0800h **T41H-0396 POSTER** Rupture characteristics of outer-rise earthquakes following the 2004 Mw 9.2 Sumatra-Andaman earthquake: **S K, A Earnest, S C**

0800h **T41H-0399 POSTER** Hydro-mechanical controls on the geometry of active accretionary wedges: **I Song**

0800h **T41H-0400 POSTER** Paleo-thermal anomaly along with the decollement off the Cape of Muroto, Japan: controlled by subduction: **N Kamiya, T Hirose, Y Yamamoto, Y Hamada, S Bowden, M Y Tsang, K Yang, S Tonai, W Lin**

0800h **T41H-0401 POSTER** Initial data observed by LTBMS sensors installed in the IODP C0006G observatory: **T Kimura, E Araki, Y Machida, K Becker, M Kinoshita, S Toczek, E Davis, M Kyo**

0800h **T41H-0402 POSTER** Temperature distribution of the toe of Nankai Trough off Muroto revealed from IODP Exp370 borehole observatory: **M Kinoshita, F Inagaki, Y Morono, V Heuer**

0800h **T41H-0403 POSTER** OBS survey and preliminary results on the deep crustal structure across the Challenger Deep: **E He, X Qiu, C Chen, Y Wang**

0800h **T41H-0404 POSTER** Investigating seismogenesis of the southern Mariana subduction zone through ocean bottom seismic experiments: **G Zhu, H Yang, J Lin**

0800h **T41H-0405 POSTER** Seismicity of the Incoming Plate and Forearc at the Mariana Trench Recorded by Ocean Bottom Seismographs: **M O Eimer, D Wiens, C Cai, D Lizarralde, H A Jasperson**

0800h **T41H-0406 POSTER** Stress Drop Analysis of Cascadia Rupture Scenarios: **M C R Sypus, K Wang, D Gao, T L Insua, S E Engelhart, A Hawkes, J S Padgett**

0800h **T41H-0407 POSTER** Determination of coseismic frictional properties on the megathrust during the 2012 M7.6 Nicoya earthquake: **S Yao, H Yang**

0800h **T41H-0408 POSTER** Geometrical and frictional effects on incomplete rupture and shallow slip deficit in ramp-flat structures: **S Li, W D Barnhart, M Moreno**

0800h **T41H-0409 POSTER** Crustal and Upper Mantle Velocity Structure of the Northwestern South American-Caribbean Subduction Zone Revealed by the CARMArray: **J Cornewhaite, W Miao, A Levander, F Niu, M Schmitz, V Dionicio, M F Nader-Nieto, M Bezada**

0800h **T41H-0410 POSTER** Small repeating earthquakes beneath the Tokai region, around the The Fujikawa-kako Fault Zone, central Japan, from 1979 to 2017 derived from NIED Kanto-Tokai seismic network and the NIED Hi-net.: **M Matsubara, H Sato**

0800h **T41H-0411 POSTER** Far-field Viscoelastic Postseismic Deformation of the 2011 Mw9 Tohoku Earthquake and Implications to Spatial Variations in Mantle Viscosity: **Y Hu, M Wang, B Zhao, K Wang**

0800h **T41H-0412 POSTER** A comparison of lower plate structure and morphology in subduction-zone segments affected by tsunami earthquakes: **J Geersen**

0800h **T41H-0413 POSTER** Influence of elastic properties around the shallow megathrust on tsunami earthquake rupture characteristics: **V Sallares, C R Ranero**

0800h **T41H-0414 POSTER** Dynamics of Subduction-induced Overriding Lithosphere Thinning: Numerical Modeling: **Y Shi, P Huangfu, Z H Li, D Wei, F Niu**

0800h **T41H-0415 POSTER** 2D numerical modeling of compressional buckling with vertical loading by thick sediment: Implications for the onset of subduction initiation along the western margin of East Sea (Japan Sea): **B D So, S Do, J Lee, S S Kim, G B Kim**

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**V41B (MM) Marquis 6**

**Thursday 0800h**

The 2018 Eruptions of Kilauea Volcano, Hawaii, and Fernandina and Sierra Negra Volcanoes, Galápagos III © (joint with GH, IN, S, T)

**Presiding:** Ingrid Johanson, USGS; Matthew Patrick, USGS; Gregory Waite, Michigan Technological University; Claire Horwell, Durham University;


0845h V41B-04 Infrasound from the repeated collapses of Kilauea caldera: High-resolution source location and wave form inversion: D Fee, J J Lyons, W A Thelen, B Shiroy, K R Anderson, G P Waite, J C Chang

0900h V41B-05 Initial Interpretation of the Source Mechanism of Caldera Collapse Events During the 2018 Kilauea Volcano Eruption: P B Dawson, A F Flinders, B A Chouet, B Shiroy, P Okubo, W A Thelen, G P Waite

0915h V41B-06 Inflationary deformation accompanying collapse/explosion events at Kilauea summit: the role of elastic rebound: P Segall, K R Anderson, I A Johanson, A Miklius

0930h V41B-07 Seismic Monitoring of the 2018 Kilauea Eruption Using a Temporary Dense Geophone Array: J Farrell, F C Lin, M Miller, S M Wu, Y Wang, E M Berg, B Shiroy, P Okubo, J C Chang

0945h V41B-08 Use of Social Media to Deliver Volcano-Hazards Information and Build Trust During the 2018 Kilauea Crisis: M P Poland, W K Stovall, E Westby, J L Ball, C J Horwell

T42A (MM) Liberty I

Thursday 1020h

(De)Cratonization Dynamics II ◊ (joint with DI, S, V)

Presiding: Klaus Gessner, Organization Not Listed;
Liang Zhao, University of Chinese Academy of Sciences; Huaiyu Yuan, Macquarie University; Vadim Levin, Rutgers University;

1020h T42A-01 Mapping modification of deep crustal structure in the Wyoming province using xenoliths, crystalline basement exposures, and receiver functions: V Schulte-Pelkum, K H Mahan, C B Condit, W Shen, J Stachnik

1035h T42A-02 Evolution of the Laramide Foreland from Early Layer-Parallel Shortening to Fault Linkage and Arch Growth: Relations to Lithospheric Stress Transmission and Crustal Architecture: A Yonkee, A B Weil

1050h T42A-03 Archean architecture of the Wyoming province; its influence on Laramide deformation: B R Frost, C D Frost, P A Mueller

1105h T42A-04 Oblique view through Big Sky orogenic crust in southwestern Montana and potential relations to geophysical structure of northern Wyoming cratonic margin: K H Mahan, C Flynn, C B Condit, V Schulte-Pelkum

1120h T42A-05 WYOMING CRATON GROWTH BY YOUNG UNDER-ACCRETION OF THE SHATSKY CONJUGATE: E Humphreys, B Schmandt, M Bezada

1135h T42A-06 Comparing and Contrasting the Crustal Imprints of the Snowbird and Great Falls Tectonic Zones: Y J Gu, Y Chen, R Dokht, R Wang

1150h T42A-07 Characterizing structure of the Thunder Basin Block and the Black Hills: Preliminary results from the CIELO seismic experiment: H A Ford, M Bezada, J S Byrnes

1205h T42A-08 Establishing the Contiguity of an Exhumed Orogenic Crustal Cross Section in Southwestern Montana, USA: C Flynn, K H Mahan, J M Allaz

T42B (MM) Liberty I-K

Thursday 1020h

Bridging Earthquakes and Earth Structure: Reconciling Deformation Observed over Geologic and Geodetic Timescales I

Presiding: Curtis Baden, Stanford University; Prof. Kaj Johnson, Indiana University; George Hilley, Stanford University; Johanna Nevitt, U.S. Geological Survey;

1020h T42B-01 Rheological constraints from long-wavelength deformation and slip gradients surrounding fault terminations and restraining bends: M E Oskin

1035h T42B-02 Short-term variability versus long-term consistency of inferred fault slip rates in the Western Transverse Ranges, Southern California: K F Townsend, M K Clark, N A Niemi

1050h T42B-03 Quaternary Slip History of the Central Sierra Madre Fault, Southern California: R J Burgette, K M Scharer, N A Lifton, A Hanson, D McPhillips, T M Rittenour
1105h T42B-04 A Model for the Initiation, Evolution, and Controls on Seismic Behavior of the Garlock Fault, California: A E Hatem, J F Dolan

1120h T42B-05 The M7 2016 Kumamoto, Japan, Earthquake: Surface Strain in the Fault Damage Zone and Shallow Fault Slip Revealed with Near-Field Geodetic Imagery: C P Scott, J Champenois, Y Klinger, E Nissen, T Maruyama, T Chiba, R Arrowsmith

1135h T42B-06 A GRACE view of the 2011 Mw 9.0 Tohoku-Oki earthquake: from slab depth to the ocean floor: I Panet, S Bonvalot, C Narteau, D Remy, J M Lemoine

1150h T42B-07 Geodetic exploration of elastic/inelastic behavior of the earth’s crust: resolution of mechanical response using interseismic, coseismic, and postseismic deformation: T Sagiya, A Meneses-Gutierrez

1205h T42B-08 A secondary zone of uplift caused by megathrust earthquakes: Y van Dinther, L E Preiswerk, T Gerya

T42C (MM) Liberty N-P

Thursday 1020h

Interplay Between Seismic and Aseismic Slip: Implications for Fault Physics II (joint with G, S)

Presiding: Valere Lambert, California Institute of Technology; Kathryn Materna, University of California Berkeley; Tomoaki Nishikawa, Disaster Prevention Research Institute, Kyoto University; Yohei Hamada, JAMSTEC

1020h T42C-01 Two-dimensional probabilistic cell automaton model for broadband slow earthquakes: S Ide, S Yabe

1035h T42C-02 Slow Slip Events in Cascadia: Evidence of Chaotic Behavior from Geodetic Position Time Series: A Gualandi, S Michel, J P Avouac

1050h T42C-03 Seafloor detection of multiple aseismic transients with an intervening seismic shock at the Izu-Bonin Trench: Y Fukao, H Sugioka, A Ito, M Yamashita, T Tonegawa, H Shiobara

1105h T42C-04 Bimodal depth distribution of slow slip events detected using GNSS data in the Hikurangi subduction zone, New Zealand: T Nishimura

1120h T42C-05 Temporal evolution of fault coupling associated with the occurrence of slow slip events in central Japan: L Bruhat, J Fukuda

1135h T42C-06 Dynamic Earthquake Sequence Simulations of a Fault in a Viscoelastic Material with a SBIEM: Y Miyake, H Noda

1150h T42C-07 RHEOLOGIC CONTROL ON SLIP DYNAMICS IN SEMI-BRITTLE ANALOG EXPERIMENTS: T Birren, J E Reber

1205h T42C-08 Aseismic to seismic transition at the brittle to ductile transition: insights from hydrothermal ring shear experiments and a microphysical model: A R Niemeijer, C J Boulton, J Chen, M van den Ende, A Fagereng, N Hellebrekers, B Verberne

T42D (MM) Liberty M

Thursday 1020h

The Nature of Creeping Faults: Where, Why, and How They Slip Slowly I (joint with G, MR, NS, S)

Presiding: Kate Chen, Department of Earth Sciences, National Taiwan Normal University; Roland Burgmann, Univ California Berkeley;

1020h T42D-01 Intriguing Mechanics of Fault Creep in the Neighborhood of Locked Patches: K Wang, Y Zhu, E Nissen, J He

1033h Discussion:

1038h T42D-02 A long-term view of Cascadia ETS: N M Bartlow, C A Williams Jr

1046h Discussion:

1052h T42D-03 Observing the Small Scale of Aseismic Slip along Continental Strike Slip Faults from Space: R Jolivet, C Lasserre, M Simons, B Rousset, J P Avouac, Z Duputel, H S Bhat, P Romanet

1100h Discussion:

1106h T42D-04 Connecting shallow and deep slow-slip-events with geologic observations and an elastic-viscoplastic solution: N W Hayman, L L Lavier

1114h Discussion:

1120h T42D-05 Shallow slow slip event on the Southern San Andreas Fault triggered by the 2017 Chiapas (Mexico) earthquake: E Tytofemyeva, Y A Fialko, J Jiang, R G Bilham, D T Sandwell, T K Rockwell, A Gontz, C Blanton

1128h Discussion:

1134h T42D-06 Shallow Fault Slip and Near-fault Deformation on the Creeping Section of the San Andreas Fault: B A Brooks, Z Liu, J Nevitt, P Lundgren, C L Glennie, M T Page, S E Minson, E J Fielding, T L Erickson, B A Erickson, D E Moore, D A Lockner, R Catchings, R G Bilham, S E Owen

1142h Discussion:
1148h **T42D-07** Fault creep as a frictional or viscous-creep process: An experimental study of the deformation of clay-rich fault gouges: **M Rempe, D R Faulkner**

1156h Discussion:

1202h **T42D-08** The Mechanics of Slow Slip: **C Marone**

1215h Discussion:
**Thursday P.M.**

### S43A (MM) Independence E

**Thursday 1340h**

**Beyond the Earthquake Cycle: Field and Modeling Constraints of Earthquake Rupture Along Complex-Geometry Fault Systems and Implications for Seismic Hazard Assessment I** (joint with NH, T)

*Presiding: Olaf Zielke, KAUST; Paul Mai, Division of Physical Sciences & Engineering; Laura Peruzza, National Institute of Oceanography and Applied Geophysics OGS;*

1340h **S43A-01** 3D Dynamic Rupture on Fractally Rough Faults in Random Heterogeneous Media: **M C B Williams,** K Duru, A A Gabriel, E M Dunham

1355h **S43A-02** Modeling Dynamic Ruptures with High Resolution Fault Zone Physics.: **X Ma,** A E Elbanna

1410h **S43A-03** Off-fault inelastic deformation and orientations of microcracks induced by dynamic ruptures on a 3D strike-slip fault with a bend: **D Liu,** B Duan

1425h **S43A-04** Dynamic rupture simulation of the 2017 Jiuzhaigou Earthquake with the stress parameters estimated from empirical relations: **F Hu,** Y Zhang, X Chen

1440h **S43A-05** A new approach to forecasting aftershocks via Coulomb stress transfer in large, complex plate-boundary earthquakes: The 2016 M=7.8 Kaikoura, New Zealand, and 2017-2018 M≤8.2 Mexico earthquakes: **S Toda,** R S Stein

1455h **S43A-06** The Role of Viscoelastic Stress Transfer in Long-Term Earthquake Cascades: Insights After the Central Italy 2016-2017 Seismic Sequence: **A Verdecchia,** B Pace, F Visini, O Scotti, L Peruzza, L C Benedetti

1510h **S43A-07** A Coupled Method Using Longterm Subduction Models to Provide Realistic Conditions for Dynamic Earthquake Models: **I van Zelst,** S Wollherr, E Madden, A A Gabriel, Y van Dinther

1525h **S43A-08** Fault Segmentation Across The Metropolitan Chilean Megathrust: Large Tsunamigenic Potential For The Next Great Earthquake: **M Carvajal,** M A Cisternas, A Gubler, M Moreno, D J Meneses

### T43A (MM) Independence D

**Thursday 1340h**

**Current Understanding of Large Igneous Provinces, Hot Spot Tracks, and Mantle Plumes I** (joint with DI, GP, V)

*Presiding: William Sager, University of Houston; Anthony Koppers, Oregon State University; Cornelia Class, Lamont -Doherty Earth Observatory; Trond Torsvik, University of Oslo;*

1340h **T43A-01** The Burkian Earth: **T H Torsvik**

1355h **T43A-02** Origin of the LLSVPs at the base of the mantle is a consequence of plate tectonics: A petrological and geochemical perspective: **Y Niu**

1410h **T43A-03** Geochemistry of Large, Low Shear-Wave Velocity Provinces in the Lower Mantle Inferred from Nd and Pb Isotopes in Oceanic Hotspots: **M G Jackson,** T W Becker, J G Konter

1425h **T43A-04** A plate tectonic origin of kimberlites on a cooling Earth: **S Tappe,** K A Smart, T H Torsvik, M Massuyeau, A Stracke, G Budde, T Kleine

1440h **T43A-05** Zircon U-Pb age constraints on purported Cretaceous hotspot magmatism in northern New England and Quebec: **S Kinney,** S A MacLennan, J Setera, B Schoene, J A VanTongeren, P E Olsen

1455h **T43A-06** Northward motion of the Azores mantle plume over the last 85 Ma: **M Arnould,** J Ganne, N Coltice, X Feng

1510h **T43A-07** Geodynamic Reconstruction of the Deep-Mantle Origin of Paleocene Doming and Volcanism in the North Atlantic: **A M Forte,** P Glisovic

1525h **T43A-08** Receiver function imaging at the crust and uppermost mantle of Ontong Java Plateau: **T Tonegawa,** D Suetsugu, S Miura, H Shiobara, H Sugioka, A Ito, T Isse, Y Ishihara, S Tanaka, M Obayashi, J Yoshimitsu, T Kobayashi
T43B  (MM) Liberty N-P  
Thursday  1340h  
Interplay Between Seismic and Aseismic Slip: Implications for Fault Physics III (joint with G, S)  
Presiding: Valere Lambert, California Institute of Technology; Kathryn Materna, University of California Berkeley; Tomoaki Nishikawa, Disaster Prevention Research Institute, Kyoto University; Yohei Hamada, JAMSTEC;  

1340h  T43B-01 Spatially complementary tectonic earthquake swarms on a transform plate boundary in North Iceland: E Rivalta, L Passarelli, S Jonsson, S S Jakobsdottir, M Hensch, S Metzger, F Corbi, T Dahm  
1355h  T43B-02 Episodic creep triggering seismic slip at the Blanco Transform Fault, Blanco Ridge segment, NE Pacific: V M Kuna, J Nabelek, J Braunmiller  
1410h  T43B-03 Earthquake nucleation and fault slip complexity in the lower crust of central Alaska: C Tape, S G Holkamp, V Silwal, J Hawthorne, Y Kaneko, J P Ampuero, C Ji, N A Ruppert, K Smith, M E West  
1425h  T43B-04 A search for longer-duration low frequency earthquakes in tremor near Parkfield, CA: J C Hawthorne  
1440h  T43B-05 The geodetic signature of slow slip events in the roots of the San Andreas Fault Parkfield segment: B Rousset, R Burgmann, M Campillo  
1455h  T43B-06 Exploring the Possibility of Dynamic Rupture Through the Creeping Section of the San Andreas Fault in a Simplified 2D Model: O Stephenson, N Lapusta  
1510h  T43B-07 Dynamic rupture modeling on the Hayward Fault, northern California – estimating coseismic and postseismic hazards of partially creeping faults: J Lozos, G Funning  
1525h  T43B-08 Slip instability and aseismic slip under multiple length scales of frictional heterogeneity: S Ray, R C Viesca

T43C  (MM) Liberty M  
Thursday  1340h  
Postcollisional Extensional Tectonics and Basin Evolution in the Gulf of Mexico and Elsewhere I  
Presiding: Rezene Mahatsente, University of Alabama; Irina Filina, University of Nebraska Lincoln; Patricia Persaud, Louisiana State University; Matthew Wielicki, University of Alabama;  

1340h  T43C-01 Cenozoic Post-Collisional Extension in Western Turkey: I Cemen, O Meray, S Sert, R Mahatsente, S Alemdar  
1400h  T43C-02 Evidence for dynamic relationship between faulting and Neogene-Quaternary volcanism in post-collisional Central Anatolia (Turkey): Implications for shallow slab subduction and rollback.: W K Schleiffarth, P J Umhoefer, M A Cosca, M R Reid, J R Delph, D E Portner, S L Beck, B Abgarmi, A Özacar  
1415h  T43C-03 Post-Collisional Lithospheric Structure and Isostasy of Eastern Anatolia: Implication for Delamination and Asthenospheric Underplating: R Mahatsente, G Önal, I Cemen  
1450h  T43C-05 Magnitude, distribution, and driving mechanisms of Basin and Range extension: insights from a province-wide cross section at 39°N: S P Long  
1505h  T43C-06 Cenozoic thermal and topographic evolution of the northern Great Basin, western U.S.: J E Lund Snee, E L Miller, C P Chamberlain, A Mulch  
1525h  T43C-07 Exhumation of near-Moho deep crust in extending orogens: C P Teyssier, M Korchinski, D Whitney, P F Rey

T43D  (CC) Hall A-C (Poster Hall)  
Thursday  1340h  
Application of Gravity, Magnetic, and Heat Flow to Tectonic Studies II Posters (joint with Di, GP, S)  
Presiding: Walter Mooney, USGS Western Regional Offices Menlo Park; Mikhail Kaban, Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences; Yufei Xi, IHEG Institute of Hydrogeology and Environmental Geology, CAGS; Yi Zhang, China University of Geosciences Wuhan;  

1340h  T43D-0416 POSTER Integrating Gravity and Magnetic Data with Remote Sensing in Structural Modelling of the Middle and Lower Benue Trough, Nigeria: E Y Yenne, C M Green, T Torvела  
1340h  T43D-0417 POSTER The Length of Some (Perhaps All) R-R Transform Faults Changes Over Time. Why?: R M Collins, V S Cronin  
1340h  T43D-0418 POSTER Heat flow and evolution of cratons: L He
1340h **T43D-0420** POSTER Thermo-compositional model, strength, and strain rate variability of the Australian plate: thermo-compositional model, strength, and strain rate variability of the Australian plate: M Tesaro, M K Kaban, A Petrunin, A Aitken

1340h **T43D-0421** POSTER The Effective Elastic Thickness in the Northern Rockies from Free-air Gravity Admittance: D Kobayashi, K F Spreenke

1340h **T43D-0422** POSTER 3D spherical inversion method for full gravity gradient tensor data: Y Zhang, Y Wu, J Yan, H Wang, A Palmero Rodriguez, Y Qiu

1340h **T43D-0423** POSTER 3-D density structure of the Ross Sea basins, West Antarctica from constrained gravity inversion and their tectonic implications: F Ji, F Li, J Gao, Q Zhang, W Hao

1340h **T43D-0424** POSTER Crustal-Scale High Density Body at the Fossil Rifted Margin of Baltica in Poland – an Analogue to Atlantic Continental Margins?: S Mazur, M Mikołajczak, P Krzywiec, M Malinowski, M Lewandowski, P Sroda

1340h **T43D-0425** POSTER Prediction of the sediment base of the South China Sea and adjacent regions from gravity inversion: J Fang

1340h **T43D-0426** POSTER Dense core flexure modeling at the Louisville Seamount Chain: G Hwang, S S Kim, Y Ko

1340h **T43D-0427** POSTER Evolution of the Gamburtsev Province from arc accretion and collision to intraplate tectonics: F Ferraccioli, W Guochao, C Finn, R E Bell

1340h **T43D-0428** POSTER Effective Elastic Thickness of the North Atlantic Lithosphere: S Zhu, C F Li

1340h **T43D-0429** POSTER Heat flow, temperature and heat budget of the Tarim Basin, northwest China: S Liu, X Li

1340h **T43D-0430** POSTER Forward and inverse techniques for gravitational data using the spherical triangular tessellation: Y Zhang, C Chen, W D Mooney

1340h **T43D-0431** POSTER Evaluating the Lithospheric Thermal Structures: What We Know and Do Not Yet Know: A Tanaka

1340h **T43D-0432** POSTER A study on deep structure of Laoshan uplift in the South Yellow Sea Basin based on joint inversion: H Liu, X Luan, B Yue

1340h **T43D-0433** POSTER Seismic investigation of the 2010-2011 volcanic unrest in Marie Byrd Land, West Antarctica: A Mordret, D Mikesell, W B Frank, Z Xu

1340h **T43D-0434** POSTER Crustal structure, rheology and mode of emplacement of the Comorin Ridge, southwest margin of Sri Lanka: implications on the East Gondwana breakup: S R Gangumalla

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**T43E (CC) Hall A-C (Poster Hall)**

**Thursday 1340h**

**Seismotectonic Processes Along Active Latin American Margins: Earthquakes and Aseismic Signatures II Posters**

*Presiding: Jorge Jara,* Ecole Normale Supérieure Paris; *Mathilde Radiguet,* ISTEerre Institute of Earth Sciences; *William Frank,* University of Southern California; *Sergio Ruiz,* Universidad de Chile;

1340h **T43E-0435** POSTER Kinematic Rupture of the April 24, 2017, Mw 6.9 Valparaíso earthquake from the joint inversion of teleseismic body waves and near-field data: A Ruiz, E Contreras Reyes, F H Ortega Cucalciati, P M Manriquez

1340h **T43E-0436** POSTER 2017 SSE in Guerrero Interacts with Forearc Crustal Faults, Major Earthquakes and SSE in Oaxaca, Mexico: E Kazachkina, N Cotte, J Jara, Y Kostoglodov, M Radiguet, A Walpersdorf

1340h **T43E-0437** POSTER The 2017 Slow slip event in Guerrero (Mexico), seen by spatial geodesy: L Maubant, E Pathier, S Daout, M Radiguet, M P Doin, E Kazachkina, V Kostoglodov, N Cotte

1340h **T43E-0438** POSTER Earthquake Swarms and Slow Slip on a Sliver Fault in the Mexican Subduction Zone: S Fasola, M Brudzinski, S G Holtkamp, S E Graham, E Cabral-Cano

1340h **T43E-0439** POSTER Dynamic rupture simulation of the 2015 Mw 8.3 Illapel (Chile) earthquake: S Ruiz, H Aochi

1340h **T43E-0440** POSTER Dynamic Rupture Analysis of Two Northern Chile Earthquakes Mw 6.3 Located in the Double Seismic Zone in the North Of Chile.: L Cabrera, S Ruiz, C Otarola Sr, R I Madariaga

1340h **T43E-0441** POSTER Strong Motion Simulation of Valparaíso 2017 Mw 6.9 Chile earthquake using a hybrid method.: F A Blaser, S Ruiz, C Otarola Sr, J Ojeda, C Pasen Sr

1340h **T43E-0442** POSTER Seismicity Changes Preceding the September 2017 Intraplate Earthquakes Along the Mexican Subduction Zone.: M Radiguet, J Jara, E Kazachkina, L Maubant, N Cotte, V Kostoglodov

1340h **T43E-0443** POSTER Slip Distribution of the 1960 Chile Earthquake from Joint Inversion of Geodetic and Far-field Tsunami Data: K Satake, T Ho, S Watada, Y Fujii

1340h **T43E-0445** POSTER Analysis of the Tocopilla (Mw 7.7) 2007 earthquake using fully Bayesian Inverse Methods: **F Ortega-Culaciati**, N P Díaz, J A Ruiz, M Simons, S E Minson

1340h **T43E-0446** POSTER Insights into the tectonic boundaries around the Panama – Choco collision zone from relocation of local seismicity and first order gravity analysis: **L Ramirez-Hoyos**, G Monsalve, A Cardona, C Ceballos

1340h **T43E-0447** POSTER Updip seismicity streaks and frictional segmentation of the megathrust observed in the 2014 Mw 8.1 Iquique, northern Chile, earthquake sequence: **H Soto**, C Sippl, B Schurr, J Kümmerow, G Asch, F J Tilmann, D Comte, S Ruiz, O Oncken

1340h **T43E-0448** POSTER High frequency sources controls strong motion of Mw 8.8 Maule 2010 earthquake: **J Ojeda**, S Ruiz, C Otarola Sr, C Pasten Sr

1340h **T43E-0449** POSTER Interseismic transient deformations along southern Peru and northern Chile subduction zone.: **J Jara**, A Socquet, B Rousset, A Walsperdorf, N Cotte

1340h **T43E-0450** POSTER Comparison between interplate and intraplate intermediate-depth earthquakes using dynamic modeling of the seismic source: **C Otarola Sr**, S Ruiz, C Herrera Sr, C E Siegel, R I Madariaga

1340h **T43E-0451** POSTER Source model of the 1906 Ecuador-Colombia earthquake (Mw8.4) based on tsunami waveforms and seismic intensity data; Implications for megathrust earthquake potential in Northern South-America: **N E Pulido Hernandez**, M Yoshimoto, A M Sarabia, T Sagiya, H Mora-Paez, M Arcila

1340h **T43E-0452** POSTER Tsunami source of the 1906 Ecuador-Colombia earthquake revisited: **M Yoshimoto**, H Kumagai

1340h **T43E-0453** POSTER Fault Slip and Strain Partitioning in Guatemala Measured by SAR Interferometry.: **B Cosenza**, C Lasserre, C DeMets, J Hollingsworth, K L Feigl, A P Ellis, E Molina, O Flores, H Lyon-Caen, P Briole

1340h **T43E-0454** POSTER Analysis of the 2014 (Mw 8.2) Pisagua Earthquake Sequence from Seismological and Geodetic Observations: **F H Ortega Culaciati**, J A Ruiz, A Maksymowicz, E Contreras Reyes, L A Rivera, V C Becerra-Carreño

1340h **T43E-0455** POSTER Non-Volcanic Tremor activity in the Chile Triple Junction detected by OBS stations: **M Saez**, S Ruiz, S Ide, H Sugioaka

1340h **T43E-0456** POSTER Patterns in Seismic Energy and Earthquake Hazard in Northern Chile: **C Hulbert**, B Rouet-Leduc, I W McBrearty, P A Johnson

1340h **T43E-0457** POSTER Finite-fault slip inversion for the Mw 6 Mutata earthquake (2016), Colombia: **J B Tary**, D F Naranjo Hernández


1340h **T43E-0459** POSTER Crustal Structure of the Ecuadorian Forearc from the Joint Inversion of Receiver Functions and Ambient Noise Dispersion Data: **C D Koch**, C Lynner, J R Delph, S L Beck, A Meltzer, M Hoskins, L Soto-Cordero, M C Ruiz, A P Alvarado, Y Font, M M Regnier, L Audin, P Charvis, A Rietbrock

1340h **T43E-0460** POSTER GPS-derived coseismic displacements caused by the 2013 Acari Mw7.0 earthquake in south Peru: **W Quiroz**, J C Villegas Lanza, A Socquet, N Cotte

1340h **T43E-0461** POSTER Slow slip and potential earthquake triggering near Guerrero, Mexico from geodetic remote sensing: **J Maurer**, D P Bekaert, E Tymofyeyeva, M H Huang, P S Agram, H Fattahi, A W Moore

1340h **T43E-0462** POSTER Spatial b-value change of Intermediate-depth earthquakes in the Cauca cluster, Colombia: **Y Chang**, P Han, X Chen

**T43F** (CC) Hall A-C (Poster Hall)

**Thursday 1340h**

Structure and Dynamics of the Upper Mantle: Characterizing the Lithosphere–Asthenosphere System from Crust to Transition Zone IV

Posters (joint with DI, MR, S, V)

Presiding: Claire Currie, University of Alberta; Vedran Lekic, University of Maryland; Jolante van Wijk, New Mexico Institute of Mining and Technology; Andrew Schaeffer, University of Ottawa;
1340h **T43F-0463 POSTER** Imaging shear wave velocity structure of the lithospheric mantle in southeast Canada and the northeast USA: **F A Darbyshire**, O Bagherpur-Mojaver

1340h **T43F-0464 POSTER** Geophysical constraints on the Cascadia backarc mantle structure, southwestern Canada: **T C Yu**, C A Currie, M J Unsworth

1340h **T43F-0465 POSTER** Regional variations in crustal seismic attenuation across Canada from Lg waveform analysis: **C Perry**, A L Bent

1340h **T43F-0466 POSTER** New Images of upper mantle structure beneath western Canada from teleseismic body-wave tomography: **C Esteve**, A J Schaeffer, P Audet

1340h **T43F-0467 POSTER** Mapping multi-mode phase speeds of surface waves in North America with array-based dispersion analysis using USArray: **H Matsuzawa**, K Yoshizawa

1340h **T43F-0468 POSTER** Seismic evidence of the lithosphere-asthenosphere boundary in the young Juan de Fuca plate: **Y Qin**, S C Singh, I Grevemeyer

1340h **T43F-0469 POSTER** Evidence for Partial Melt in the Northern Appalachian Anomaly: **M Pirrie**, W H Menke

1340h **T43F-0470 POSTER** Upper Mantle P wave Attenuation Tomography Beneath the Southeastern United States: **A Shrivastava**, K H Liu, S S Gao

1340h **T43F-0471 POSTER** Ps mantle transition zone imaging beneath the Colorado Rocky Mountains: Evidence for an upwelling hydrous mantle: **Z Zhang**, K G Dueker, H H Huang

1340h **T43F-0472 POSTER** Imaging Structure beneath East Central United States Using CCP Stacking and Scattering Kernel Analysis of Ps and Sp Receiver Functions: **S Deng**, A Levander, S Hansen

1340h **T43F-0473 POSTER** The Northern Gulf Anomaly: characterizing asthenospheric upwelling at a continental edge using seismic velocity perturbations: **Z Krauss**, W H Menke

1340h **T43F-0474 POSTER** Toward a joint inversion of Rayleigh wave phase velocity, site amplification, and ellipticity measurements for a 3-D shear-velocity model of the U.S.: **J Cloud**, C A Dalton

1340h **T43F-0475 POSTER** Radially anisotropic shear wave velocity structure beneath eastern North America from surface wave tomography: **Z Tao**, A Li

1340h **T43F-0476 POSTER** Improved Tomography of the Columbia River Flood Basalts and Central Idaho Regions Reveals New Geometries for the Fast Anomalies in the Upper Mantle: **A C Stanciu**, E Humphreys, R W Clayton

1340h **T43F-0477 POSTER** S-wave Relative Travel Time Tomography for Mantle Structure Beneath East Asia.: **Y W KIM**, S J Chang, J Ning, J Wen

1340h **T43F-0479 POSTER** Crustal rheology of southern Tibet constrained from lake-induced viscoelastic deformation: **M Henriquet**, J P Avouac, B G Bills

1340h **T43F-0480 POSTER** Seismic evidence for craton reworking at Ordos block: **Z Guo**, S Li, Y J Chen

1340h **T43F-0481 POSTER** Lower Crust High Velocity Layer’s Relationship with Magmatic Activity of Nansha block, South China Sea: **K Li**, C Shen, X Xie, Z Zhao, P Xi, Y Zhou

1340h **T43F-0482 POSTER** Upper Mantle Velocity Structure from Rayleigh-wave Phase Velocity Tomography Beneath the Northern Ordos block, North China: **Z Yao**, C Wang, E A Sandvoll

1340h **T43F-0483 POSTER** 3D full waveform inversion for crust velocity in Nanling, South China: **C Zhang**, G Jiang, G Zhang

1340h **T43F-0484 POSTER** A Study of Crust-mantle Transition Zone Based on Pn Waveforms: Application to Tectonic Affinity Between Eastern China and southern Korean Peninsula: **S Ding**, S Ni, Y Kim, X He

1340h **T43F-0485 POSTER** Seismic Constraints on Erosion and Breakup of the Continental Lithosphere at the Eastern Margin of Eurasian Plate, and an Implication of Intraplate Volcanism: **S Kim**, J H Song, B Tauzin, J Rhie, H Tkalcic

1340h **T43F-0486 POSTER** Seismic constraints on the thermal structure of the Italian crust: **C Gao**, G Diaferia, F Cammarano, N Piana Agostinetti, V Lekic, I Molinari

1340h **T43F-0487 POSTER** High resolution 3-D isotropic Rayleigh wave velocity model across the Alpine-Mediterranean mobile belt: **A M M E El-Sharkawy**, T M Meier, S Lebedev, M Hamada, L Cristiano, C Weidle, D Koehn
### Thursday 1340h Structure and Dynamics of the Upper Mantle: Characterizing the Lithosphere–Asthenosphere System from Crust to Transition Zone V Posters (joint with D1, MR, S, V)

**Presiding:** Claire Currie, University of Alberta; Vedran Lekic, University of Maryland; Jolante van Wijk, New Mexico Institute of Mining and Technology; Andrew Schaeffer, University of Ottawa;

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<td><strong>T43G-0488</strong> POSTER Absence of Thermal Influence from the African Superswell and Cratonic Keels on the Mantle Transition Zone Beneath Southern Africa: Evidence from Receiver Function Imaging:</td>
<td>M Sun, X Fu, K H Liu, S S Gao</td>
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<td><strong>T43G-0489</strong> POSTER Testing the upper-mantle seismic signature of plume-lithosphere interaction in the northern East-African Rift:</td>
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<td><strong>T43G-0490</strong> POSTER Preliminary upper mantle structure beneath the Arabian Peninsula and East Africa from S-wave relative travel time tomography.:</td>
<td>J A LIM, S J Chang, P M Mai, H M Zahrani</td>
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<td>J Dreiling, F J Tilmann, X Yuan, C A Haberland, S W M Seneviratne</td>
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<td><strong>T43G-0497</strong> POSTER Crustal structure variation across the southwestern Indian Ocean from receiver functions determined at Ocean-Bottom Seismometers:</td>
<td>G Barruol, A Dofal, F R Fontaine, L Michon, H Tkalcic</td>
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<td><strong>T43G-0499</strong> POSTER P and S-wave Velocity Structure Beneath the Equatorial Mid-Atlantic Ridge from the Joint Inversion of Teleseismic and Local Data, Collected with the PI-LAB OBS Experiment.:</td>
<td>P Bogiatzis, C Rychert, N Harmon, J M Kendall, D Schlaphorst, S P Hicks</td>
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<td><strong>T43G-0500</strong> POSTER Lithospheric Structure of Scandinavia derived from Ambient Noise and Surface Waves:</td>
<td>A Mauzerberger, H Sadeghisorkhani, F J Tilmann, O Gudmundsson, V Maupin</td>
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<td><strong>T43G-0501</strong> POSTER The Mantle Transition Zone in Scandinavia:</td>
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<td>M Assumpcao, M B Bianchi, M P Rocha, J Jullà, J C Rivadeneyra Vera, V Cedraz</td>
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<td><strong>T43G-0503</strong> POSTER Lithosphere expression of the boundary between the Amazonian and extra-Amazonian domains of the South American Platform from travel-time seismic tomography:</td>
<td>M P Rocha, R A Fuck, M Assumpcao, P A D Azevedo, G Affonso, I S L Costa, D Farrapu Albuquerque</td>
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1340h **T43G-0510** POSTER Removing mantle lithosphere under orogens: Delamination versus Convective thinning: T Lei, Z H Li, M Liu

1340h **T43G-0511** POSTER Can grain boundary pre-melting explain the sharp lithosphere-asthenosphere boundary?: H Yamauchi, Y Takei

1340h **T43G-0512** POSTER 3-D Analysis of Lithospheric 'Super-Drips': Insights From High Resolution Analog Models: O Gogus, T N Santimano, N P Stroikopoulous, J Andersen, R Pysklywec, L Harris, J H J Bedard

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### T43H (CC) Hall A-C (Poster Hall)

**Thursday 1340h**

**The Complex Multiscale Earth: Holistic Modeling of the Crust and Upper Mantle Leveraging Multiple Data Sets to Robustly Constrain Structure and Dynamics I Posters** (joint with G, GP, MR, S)

*Presiding: Javier Fullea, Dublin Institute for Advanced Studies; Max Moorkamp, University of Leicester; Carmen Gaina, University of Oslo; Andrew Schaeffer, University of Ottawa; Carmen Gaina, University of Oslo;* 

1340h **T43H-0513** POSTER Thermodynamically constrained joint inversion of seismic refraction, surface elevation and gravity data: Crustal structure and composition in the Porcupine Basin (North-East Atlantic): D Molodtsov, J Fullea, M Guerri, B Mather, M Prada

1340h **T43H-0514** POSTER Integrating gravity and surface elevation with magnetic data: mapping the Curie temperature beneath the British Isles and surrounding areas: J Fullea, E Baykiev, M Guerri

1340h **T43H-0515** POSTER Waveform tomography of the South Atlantic Ocean and the African and South American Continents: N L Celli, S Lebedev, M Ravenna, C Gaina, A J Schaeffer

1340h **T43H-0516** POSTER A 3-D Shear Wave Velocity Model of the Crust and Uppermost Mantle Beneath Southern Africa by Joint Inversion of Rayleigh Wave Phase Velocity Dispersion and Receiver Functions: T Wang, K H Liu, Y Dai, Q Yang, S S Gao

1340h **T43H-0517** POSTER A link between seamount volcanism and structures of the deep Earth: M Domeier, C P Conrad, K Selway

1340h **T43H-0518** POSTER Modeling Lithospheric Stress of Continental United States: Z Cao, L Liu, Q Zhou

1340h **T43H-0519** POSTER WINTERC: a new Global thermochemical model constrained by seismic waveforms, heat flow, surface elevation and gravity satellite data.: J Fullea, S Lebedev, Z Martinec, N L Celli

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### T43I (CC) Hall A-C (Poster Hall)

**Thursday 1340h**

**The Arctic Connection: Investigating the Tectonic Evolution of the Circum-Arctic I Posters** (joint with GP, MR, S, V)

*Presiding: Andrew Schaeffer, University of Ottawa; Grace Shephard, University of Oslo; Owen Anfinson, University of Texas at Austin; Carmen Gaina, University of Oslo;* 


1340h **T43I-0525** POSTER Early Cretaceous Arctic Palaeotopography as Constrained by Barents Sea Sediment Budget: I Midtkandal, J M Holbrook, J I Faleide, C Myers, A E van Yperen, G E Shephard, J P Nystuen

1340h **T43I-0526** POSTER Cenozoic Erosion of the Barents Sea Shelf, Norwegian Arctic: A Review: A Lasabuda, J S Laberg, S M Knutsen, T A Rydningen

1340h **T43I-0527** POSTER The Crust and Upper Mantle of the Eurasia Basin Revealed by Geophysical data and Mantle Tomography Models: C Gaina, A J Schaeffer, A M Nikishin, S Lebedev, A Minakov, F Breyer

1340h **T43I-0528** POSTER Evidence for ephemeral middle Eocene to early Oligocene Greenland glacial ice and pan-Arctic sea ice: A Tripati, D A Darby
Tectonophysics: AGU Fall Meeting 2018

1340h **T43I-0529 POSTER** Curie depth estimation from magnetic anomaly data: A re-assessment using multitaper spectral analysis and Bayesian inference: **P Audet**, J Gosselin, É Gaudreau

1340h **T43I-0530 POSTER** Origin of the northern Chukchi Borderland: volcanic features in a rifted continental setting: **D R Hutchinson**, H R Jackson, D Chian, J Shimeld, D Mosher, R Saltus, G N Oakey


1340h **T43I-0532 POSTER** New constraints on crust and mantle structure surrounding the Beaufort Sea, western Canadian Arctic, from a new broadband seismic array: **A J Schaeffer**, P Audet, S Cairns, B Elliot, H Falck, M G Bostock, F A Darbyshire, C Esteve, D B Snyder

1340h **T43I-0533 POSTER** Northwind Ridge - Canada Basin: New Constraints for Tectonic Development of the Canada Basin: **I Ilhan**

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**V43G (CC) Hall A-C (Poster Hall)**

**Thursday 1340h**

**New Insights into Oceanic Spreading Centers from Seafloor Observatories Posters** (joint with B, OS, S, T)

**Presiding:** Christian Baillard, School of Oceanography, University of Washington; **Thibaut Barreyre**, K.G.J. Centre for Deep Sea Research, University of Bergen; **Marjolaine Matabos**, IFREMER; **David Butterfield**, University of Washington, NOAA/PMEL;

1340h **V43G-0194 POSTER** Geological-geochemical exploration methods for hydrothermal deposits prospecting in the Southwest Indian Mid-Ocean Ridge: **X Su**, S Ly, H Li, C Tao

1340h **V43G-0195 POSTER** High-resolution magnetic exploration of Longqi hydrothermal field (49.6°E) on SWIR: **W Tao**, C Tao, M Tivey, J J University, Z Jinhui

1340h **V43G-0196 POSTER** In situ primary production in Mid-Ocean Ridges hydrothermal plumes: insights from biogeochemical modelling: **C Cathalot**, A Perhirin, F Chever, G Roullet, J Gula, A Godfroy, E Roussel, P M Sarradin


1340h **V43G-0198 POSTER** Hydrothermal plumes along the East Pacific Rise, 1.9°N-6.1’S: Plume distribution and relationship to the apparent magmatic budget: **S Chen**, C Tao

1340h **V43G-0199 POSTER** Geochemical Diversity of Lavas from the 8°20’N Seamount Chain Provides Insights into Seamount Evolution from a Heterogeneous Mantle: **E M Conrad**, M R Perfitt, M Anderson, V D Wanless, D J Fornari, P M Gregg

1340h **V43G-0200 POSTER** Off-Axis Seamount Chain Lavas at 8°20’ N Reveal a Spatially Complex, Heterogeneous Mantle Near the East Pacific Rise: **V D Wanless**, M Anderson, M R Perfitt, P M Gregg, D J Fornari, E E McCully, W I Ridley

1340h **V43G-0201 POSTER** Transition from rifting to seafloor spreading behind the tip of the westward propagating Cocos-Nazca spreading center: **D K Smith**, E M Klein, H Schouten, R Parnell-Turner, J R Cann, C Dunham, G Alodia, I Blasco, B W Wernette, D Zawadzki, E Latypova, S Afshar, S Curry

1340h **V43G-0202 POSTER** Initial rifting to seafloor spreading: geochemical and petrologic variations in basalts from the Cocos-Nazca Spreading Center: **B W Wernette**, E M Klein, D K Smith, H Schouten, R Parnell-Turner, J R Cann, C Dunham, G Alodia, I Blasco, C Dunham, S Afshar, G Alodia, E Latypova

1340h **V43G-0203 POSTER** A Comparison of Viral Populations Inhabiting Atlantic and Pacific Oceanic Crustal Fluids: **O D Nigro**, B J Tully, S Jungrbluth, J A Huber, M S Rappe, G Steward


1340h **V43G-0205 POSTER** Near seafloor dynamics of mid-ocean ridge hydrothermal flows and formation of diffuse vents at the Lucky Strike hydrothermal field, mid-Atlantic ridge: **B Wheeler**, M Cannat, F J Fontaine, V Chavagnac

1340h **V43G-0206 POSTER** In-situ and Acoustic Observations of Hydrothermal Discharge at ASHES Vent Field: preliminary results from an OOI Cabled Array Case Study: **K G Bemis**, G Xu, L N Germanovich, D R Jackson, A N Ivakin, A Marburg

1340h **V43G-0207 POSTER** Melt Supply Variations at Slow-Spreading Ridges Control Mode of Upper Crustal Construction: Constraints from Distribution of Volcanic Facies along the Lucky Strike Segment (Mid-Atlantic Ridge): **C Gini**, J Escartin
**Thursday  1340h**

**Storage, Cycling, and Environmental Consequences of Magmatic Volatile Transfer from the Mantle to the Atmosphere Posters**

*Presiding: Tobias Fischer,* University of New Mexico

Main Campus; *Benjamin Black,* CUNY City College of New York; *Taryn Lopez,* University of Alaska Fairbanks; *James Muirhead,*

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**1340h V43I-0244** *POSTER* Analyzing sulfur and chlorine behavior in the 2006 eruption of Augustine volcano: *A Wright,* S Ding, J D Webster


**1340h V43I-0246** *POSTER* Tracing volatile cycling from subduction to outgassing along the Aleutian Arc: *T M Lopez,* T P Fischer, T A Plank, A Malinverno, A L Rizzo, D J Rasmussen, E Cottrell, C A Werner, C Kern, T Ilanko, L Buff, J Andrys, K A Kelley

**1340h V43I-0247** *POSTER* Carbonatites and the Isotopic Composition of Flood Basalt Carbon: *E Gales,* B A Black, L T Elkins-Tanton

**1340h V43I-0248** *POSTER* Early Deccan Traps CO₂ Budget & Degassing History Constrained from Melt Inclusions: *A Hernandez Nava,* B A Black, S A Gibson, R J Bodnar, P R Renne, L Vanderkluysen

**1340h V43I-0249** *POSTER* H₂O and F contents in Mt. Hood magmas recorded by plagioclase phenocrysts: *J R Caseres,* J L Mosenfelder, M M Hirschmann

**1340h V43I-0250** *POSTER* Stable isotope geochemistry of volatiles in thermal springs along the transition from amagmatic flat-slab subduction to the magmatic arc in the Peruvian Andes: *D L Newell,* H Upin, B E Scott, M J Jessup, T A Grambling, C A Shaw, C A Hughes

1340h **V43J-0252 POSTER** Volcanic Mercury and CO₂ Venting Through East Lake, Newberry Volcano, OR: S M Wagner, J C Varekamp, C A Cooke, C Smith, E Thomas, C Cauley, P Tartell

1340h **V43J-0253 POSTER** The chemical evolution of Paulina Lake (Newberry volcano OR) waters over the last 3000 years: C Cauley, S Koetter, C Smith, H Sonnenberg, P Tartell, S M Wagner, E Thomas, J C Varekamp

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**V43J (CC) Hall A-C (Poster Hall)**

**Thursday 1340h**

**The 2018 Eruptions of Kīlauea Volcano, Hawaii, and Fernandina and Sierra Negra Volcanoes, Galápagos V Posters © (joint with GH, IN, S, T)**

**Presiding:** Ingrid Johanson, USGS; Matthew Patrick, USGS; Gregory Waite, Michigan Technological University; Claire Horwell, Durham University;

1340h **V43J-0254 POSTER** 4D full-wave seismic tomography of the Kilauea volcano, Hawai‘i: F Deng, Y Shen, N Wang, Q Wu

1340h **V43J-0255 POSTER** A Tale of Two Eruptions: Moment Tensor Analysis of Near-Field Seismic Waveforms at Kilauea in 2018: VH Lai, Z Zhan

1340h **V43J-0256 POSTER** Addressing the Challenges of Ground-Based Monitoring of SO₂ Emissions from the Lower East Rift Zone Eruption of Kilauea Volcano with Satellite-Based Thermal Infrared Remote Sensing: V J Realmuto, T Elias, C Kern, N A Krotkov, C Li


1340h **V43J-0259 POSTER** Analysis of thermal emission from Kilauea’s 2018 Lower East Rift Zone eruption, using satellite remote sensing assets: R G Vaughan, M E Rumpf, D P Mayer, M R Patrick, R L Wessels, J P Griswold

1340h **V43J-0260 POSTER** Andesite Erupted from Kilauea Volcano During the 2018 Eruption: C A Gansecki, R L Lee

1340h **V43J-0261 POSTER** Applying insights from the 2018 Kilauea East Rift eruption to modeling scoria and spatter cone formation: K G Bemis

1340h **V43J-0262 POSTER** Assessing lava flow dynamics and rheology using sUAS data: E Lev, J Oppenheimer, B B Carr, R L Perroy, H R Dietterich, A K Diefenbach

1340h **V43J-0263 POSTER** Conduit gravity-inertia oscillation, a mechanism for very long period (VLP) seismicity at Kilauea volcano: C Liang, J A Crozier, E M Dunham, L Karlstrom

1340h **V43J-0264 POSTER** Continuous gravity reveals huge mass changes during the onset of intrusion, eruption, and collapse at Kilauea Volcano, Hawai‘i, April–May 2018: M P Poland, D Carbone, M R Patrick

1340h **V43J-0265 POSTER** Crustal deformation associated with the 2018 eruption of Kilauea Volcano, Hawaii, revealed by ALOS-2/PALSAR-2: T Abe, M Ohki, T Tadono


1340h **V43J-0267 POSTER** Did Excessive Rainfall Contribute to the Onset of the 2018 Kilauea Activity?: J Farquharson, F Amelung

1340h **V43J-0268 POSTER** Episodic Magma Transport Before the Eruption of the 2018 Kilauea Volcano, Hawaii: H Huang, L Meng

1340h **V43J-0269 POSTER** Evolution of the Pacific Tsunami Warning Center’s Operational Procedures for Hawai‘i Local Earthquakes in Response to New Eruptive Activity at Kilauea Volcano: V Sardina, K K Koyanagi, S Weinstein, N C Becker, C McCreery

1340h **V43J-0270 POSTER** Feedback Between Dike Intrusions, Opening in the Deep Rift Zones, and Flank Motion, Suggested by the Numerical Modeling of Geodetic Data Spanning 1993-1997 at Kilauea Volcano: C Wauthier, S Conway, Y Fukushima, M P Poland


1340h **V43J-0273** POSTER Hawaii Island Seismicity High-Precision Relocation 1986–2017: R S Matoza, P M Shearer


1340h **V43J-0276** POSTER Imbroglio by an Inferno: The IS-GEO Hawaii Workshop and ad hoc sensor network session: P Marchetto, A M Matheny, C Yang, S A Pierce, K E Maull, J Powell, J Chua, J Leeman, G Jacobs

1340h **V43J-0277** POSTER Implications of Critical Flow Phenomena for Estimating Lava Flux During Recent Activity at Kilauea Volcano: K V Cashman, H R Dietterich, G Grant, J J Major

1340h **V43J-0278** POSTER Increase in pressure in the deep magma reservoir detected prior to the 2018 Kilauea eruption with ambient seismic noise interferometry: C Donaldson, G Olivier, F Brenguier, P Okubo, R Carey

1340h **V43J-0279** POSTER InSAR deformation time-series of the 2018 Kilauea events: depletion of the volcano, the east rift zone and the Mw 6.9 Earthquake: X Xu, B R Smith-Konter, L A Ward, L M Burkhard, G Blewitt, D T Sandwell

1340h **V43J-0280** POSTER Insights into Kilauea’s Magmatic Plumbing System from the Leilani 2018 Eruption: M Rhodes, M O Garcia

1340h **V43J-0281** POSTER Insights into Magma Mixing and Sulfur Degassing During the 2018 Kilauea Fissure Eruption via Mineral and Melt Inclusion Geochemistry: A H Lerner, R L Lee, C A Gansecki, P A Nadeau, P J Wallace, T Elias, C Kern, C R Thornber, L E Clor, P J Kelly, C A Werner, M Cappos

1340h **V43J-0282** POSTER Insights into the collapse of Kilauea caldera using seismicity and infrasound: W A Thelen, D R Shelly, G P Waite, A Wech, B Shiro

1340h **V43J-0283** POSTER Ionospheric Signature Recorded on the Hawaii GPS Network of the Mw 6.9 Earthquake and Tsunami: L Rolland, S A, C Twardzik, D Mikesell, A Sladen, B Delouis, D Rivet, C S Larmat, F Zedek, M S Bagiya


1340h **V43J-0285** POSTER Modulation of seismic activity in Kilauea’s East Rift Zone by summit inflation and deflation: D Roman, C Wauthier, M P Poland

1340h **V43J-0286** POSTER Monitoring the Kilauea lava flow evolution using Sentinel2 and Landsat8 images in an open WebGIS environment.: M Musacchio, M Silvestri, M F Buongiorno

1340h **V43J-0287** POSTER Near Field observation of 2018 Eruption of Kilauea volcano at Fissure 8 Lower East Rift Zone: A Namiki, I Sumita, M R Patrick

1340h **V43J-0288** POSTER Pāhala mantle source area earthquake swarms: reliable precursors to eruption at Kilauea?: M K Burgess, W A Thelen

1340h **V43J-0289** POSTER Preliminary Study of Mantle Fracture Zone Earth Quakes Beneath Hawaii: D Worcester, H Lehto

1340h **V43J-0290** POSTER RAPID Dense Seismic Array Deployment in Response to Recent Kilauea Activity: Deployment Logistics, Array Design, and Data Quality: M Miller, J Farrell, F C Lin, S M Wu, Y Wang, E M Berg, B Shiro, P Okubo, J C Chang

1340h **V43J-0291** POSTER Reducing future risk during the 2018 Kilauea eruption: a new model for enabling subject matter expert-decision maker engagement: A Pennaz, K A Ludwig, A Wilkin

1340h **V43J-0292** POSTER Seismic Monitoring of the Kilauea Caldera Collapse Reveals Repeated Shear Failure on a Ring Fault: J Wilding, M Nettles, G Ekstrom, M Howe

1340h **V43J-0293** POSTER Shear Wave Splitting Tomography at Kilauea: J H Johnson, R Herd, J Eyles, B Shiro, B McLeod

1340h **V43J-0294** POSTER Size-resolved chemistry of volcanic aerosol from the 2018 Kilauea Lower East Rift Zone eruption, traced from source to exposed communities: E Liu, E Ilyinskaya, E Mason, P Wieser, R C W Whitty, M Edmonds, T A Mather, T Elias, P A Nadeau, C Kern, D J Schneider, C Oppenheimer
1340h **V43J-0295** _POSTER_ Spatiotemporal Variations of Seismic Parameters During the 2018 Kilauea East Rift Zone and Summit Activity: G Lin, F Aziz Zanjani, P Okubo

1340h **V43J-0296** _POSTER_ Statistics of seismicity associated with a sequence of explosive eruptions at Kilauea, Hawaii: R Fildes, L H Kellogg, D L Turcotte, J B Rundle

1340h **V43J-0297** _POSTER_ Structural readjustment due to large-scale mass redistribution at active basaltic shield volcanoes based on multi-temporal SAR satellite data: N Richter, M P Poland, A Peltier

1340h **V43J-0298** _POSTER_ Sulfur dioxide emissions associated with the May 2018 fissure eruption in Kilauea’s Lower East Rift Zone: C Kern, T Elias, P A Nadeau, A H Lerner, C A Werner, M Cappos, L E Clor, P J Kelly, S A Carn, N Theyes

1340h **V43J-0299** _POSTER_ Synthesizing satellite, mobile monitoring, and surface networks for air quality resulting from Kilauea Volcano: L Golston, D Pan, X Guo, L Tao, R Wang, K Olander, J McSpiritt, N Li, L P Wendt, M A Zondlo

1340h **V43J-0300** _POSTER_ Temporal Velocity Changes on the East Rift Zone of Kilauea Concurrent with the Volcanic Activity of 2018 Interpreted from Changes in Single-Station Correlation Functions: T A Lee, M Ishii, P Okubo

1340h **V43J-0301** _POSTER_ The 2018 Kilauea Eruption along the East Rift Zone Is Becoming Voluminous Enough to Cause Substantial Global Warming Just Like Other Extensive, Effusive, Sub-aerial, Basaltic Lava Flows Found Worldwide: P L Ward

1340h **V43J-0302** _POSTER_ The First 100 Minutes in the Life of an Hawaiian Fissure: Segment 8 on Kilauea’s Lower East Rift Zone: B F Houghton, B H Walker, T R Orr, C M Tisdale

1340h **V43J-0303** _POSTER_ The infrasound signal from a draining lava lake: the exceptional recordings from Halem’a’uma’u, Kilauea volcano in April and May 2018: G P Waite, W A Thelen, B Shiro

1340h **V43J-0304** _POSTER_ The rapid emplacement of lava flows in the Lower East Rift Zone of Kilauea, May 2018: M E Rumpf, C Parcheta, M R Patrick, R G Vaughan

1340h **V43J-0305** _POSTER_ The velocity variations of the Kilauea Volcano area of Hawaii revealed by ambient noise: Z Liu, C Liang

1340h **V43J-0306** _POSTER_ The Volcano Rapid Response Campaign after the Kilauea eruptions (VolKila): J P Vernier, L Kalnajs, J A Diaz

1340h **V43J-0307** _POSTER_ Triggering of the 4th May 2018 Mw 7.0 Hawaii earthquake by dike intrusion: K Chen, J D Smith, J P Avouac, Z Liu, Y T Song

1340h **V43J-0308** _POSTER_ Understanding Summit Failure Processes during the 2018 Kilauea Eruption through Analysis of Earthquake Swarms: G Tepp, A J Hotovec-Ellis, M M Haney, W A Thelen

1340h **V43J-0309** _POSTER_ Very Long-Period Seismic Signals and Collapse Events at the Kilauea Summit Crater in 2018: L Ye, T Lay, H Kanamori, E E Brodsky, H Tsuruoka, K Satake

1340h **V43J-0310** _POSTER_ Volcanic signals in webcam data: Building a Change Detection and Outreach Tool: P W Webley

1340h **V43J-0311** _POSTER_ Was Kilauea’s East Rift Zone “primed” for intrusion? Possible evidence from ambient noise seismic interferometry.: A F Flinders

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**V43K (CC) Hall A-C (Poster Hall)**

**Thursday 1340h**

**Upper Crust Evolution: Models of Formation and Composition Posters** (joint with S, T)

**Presiding:** Scott Wipperfurth, University of Maryland College Park; Jill VanTongeren, Rutgers University New Brunswick; C. Keller, Berkeley Geochronology Center; Oliver Jagoutz, Massachusetts Institute of Technology;


1340h **V43K-0313** _POSTER_ Crustal growth models demystified: J Korenaga

1340h **V43K-0314** _POSTER_ The influence of mantle refertilisation on the formation of TTGs in a plume-lid tectonics setting: R Fischer, T Gerya

1340h **V43K-0315** _POSTER_ Continental margin processes in the Neoarchean: insights from the Angikuni Lake, Nunavut, Canada: S Regan, J R Chiarenzelli, L Aspler, M L Williams, B Cousens, M J Jercinovic

1340h **V43K-0316** _POSTER_ New ~1.90 Ga Bayan Obo mélange along the northern margin of the North China craton: Implications for the assembly of Columbia supercontinent: C Wu, Z Zhou, A V Zuza, G Wang, C Liu, T Jiang
1340h V43K-0317 POSTER Episodic Arc Volcanism Related to the Precambrian Supercontinent Cycle: Insights from Geochemical and Nd Isotopic Compositions of Felsic Tuffs from Proterozoic Sedimentary Basins of India: P Basu, R Chakrabarti

1340h V43K-0318 POSTER Maurice Ewing Bank Complex: A Missing Piece to Rodinia Puzzle and Beyond.: F Chemale Jr, M Rodrigues de Vargas, T J Girelli

1340h V43K-0319 POSTER Episodic Neoproterozoic magmatism in the Songnen-Zhangguangcai Range Massif, NE China: Implications for tectonic evolution of the Rodinia: J Luan, W Xu, F Wang, P Guo

1340h V43K-0320 POSTER Petrogenesis of Late Indosinian I-type Qingxi Pluton in Jiangxi Province, South China: Evidence from U-Pb Zircon Geochronology, Whole-rock Geochemistry and Sr-Nd-Hf Isotopes: L Wang, Z Zhao, X Mo

1340h V43K-0321 POSTER Petrogenesis of Mesozoic Granitic Pluton in the Eastern Hunan Province, South China: Evidence from Zircon and Whole-rock Geochemistry: Q Liu, M He, J F Sun

1340h V43K-0322 POSTER Episodic crustal thickening and growth of the Gangdese arc in south Tibet: L Guo, H F Zhang

1340h V43K-0323 POSTER Cadomian basement evolution and Cenozoic crustal growth in Iran: Constraints from zircon Hf isotopes: H Y Chiu, S L Chung, M H Zarrinkoub, K N Pang, H Y Lee

1340h V43K-0324 POSTER Understanding Magmatic Processes and Evolution in Georgian Caucasus: H Y Lee, Y H Chang, S L Chung

1340h V43K-0325 POSTER Late Miocene garnet-bearing andesites in the Northern Andean Block and their tectonic implications: S Hoyos, M Weber, E Cottrell, A L Cardenas-Rozo, J Duque, A Beltran-Triviño

1340h V43K-0326 POSTER Recovery of 4He concentration profiles across the zircon He partial retention zone through application of step-heating and direct laser-ablation to zircon 4He/3He thermochronology: C Brennan, D F Stockl, D B Patterson


S44A (MM) Independence E
Thursday  1600h

Beyond the Earthquake Cycle: Field and Modeling Constraints of Earthquake Rupture Along Complex-Geometry Fault Systems and Implications for Seismic Hazard Assessment II

(joint with NH, T)

Presiding: Olaf Zielke, KAUST; Oona Scotti, IRSN Institut de Radioprotection et de Sûreté Nucléaire;

1600h S44A-01 Fully Physics-Based PSHA: Coupling RSQSim with Deterministic Ground Motion Simulations: K R Milner, B E Shaw, T H Jordan, S Callaghan, C A Goulet

1615h S44A-02 How does fault roughness influence surface displacement?: L Bruhat, Y Klinger, A Vallée, E M Dunham

1630h S44A-03 Radiocarbon Dating of the 1934AD Bihar-Nepal Earthquake Surface Rupture Reveals Systematic Biases that Cause Artificially Aging of Historical events: L Bollinger, M Rizza, S N Sapkota, P Tapponnier, Y Klinger, C Karakas, M Riesner

1645h S44A-04 Paleoseismology along the Himalayan Frontal Thrust (HFT) of Nepal after the Mw7.8 2015 Gorkha earthquake: S G Wesnousky, Y Kumahara, D Cham lagain

1700h S44A-05 Limitations of Paleoseismic Data Along the Fastest Slipping Section of the San Andreas Fault: S O Akciz, L Grant Ludwig, R Arrowsmith

1715h S44A-06 Improving confidence and revealing fault complexity using multiple sampling sites in 36Cl Quaternary slip rate studies: H Goodall, L C Gregory, L N J Wedmore, G Roberts, R P Shanks, K J W McCallery, R Amey, A J Hooper


1745h S44A-08 Slip Deficit on the North Anatolian Fault: Implications for Pending Earthquakes Offshore Istanbul: H Ozener, F Bulut, B Aktug, C Yaltırak, A Dogru
T44A (MM) Liberty L

Thursday 1600h

Exploring Subduction Initiation Processes and Subduction Zone Dynamics: New Insights from Scientific Drilling, Marine Geophysics, and Ophiolites I (joint with OS, S, V)

Presiding: Joann Stock, California Institute of Technology; Brandon Shuck, University of Texas at Austin; Anders McCarthy, University of Bristol; Marco Maffione, University of Birmingham;

1600h T44A-01 Rift-inheritance and subduction initiation at magma-poor rifted margins: implications for the formation of Alpine-type orogens: J Tugend, G Mohn, M Emmanuel, G Manatschal

1615h T44A-02 Do supra-subduction zone ophiolites form by diffuse spreading of the forearc during subduction initiation? A Mariana – Troodos analogy: J Ribeiro, J A Pearce, C J MacLeod, J C J Lissenberg

1630h T44A-03 A Subduction Initiation Rule Origin for SW Pacific Ophiolites: Implications for Ophiolites, Forearcs and the Tectonic Evolution of the SW Pacific: S A Whattam


1715h T44A-06 Drilling Reveals Continental-scale Impacts of Eocene Tonga-Kermadec Subduction Initiation: R Sutherland, G R Dickens, P Blum

1730h T44A-07 An Examination of Upper-Plate Uplift Driven by Subduction Initiation in Haida Gwaii, Canada.: P Schoettle-Greene, A R Duvall

1745h T44A-08 Thermal Softening Induced Strain Localization, a Possible Mechanism of Lithospheric Scale Shear Zone Formation and Subduction Initiation: D Kiss, L Candioti, T Duret, Y Podladchikov, S M Schmalholz

T44B (MM) Liberty M

Thursday 1600h

Postcollisional Extensional Tectonics and Basin Evolution in the Gulf of Mexico and Elsewhere II (joint with EP)

Presiding: Rezene Mahatsente, University of Alabama; Irina Filina, University of Nebraska Lincoln; Patricia Persaud, Louisiana State University; Matthew Wielicki, University of Alabama;

1600h T44B-01 A New Model for the Mesozoic Tectonostratigraphic Evolution of the Gulf of Mexico Basin: I O Norton, J Snedden

1615h T44B-02 Gulf of Mexico: A Summary of its Evolution and Insights from Southern Mexico: R S Molina-Garza, J L Pindell

1630h T44B-03 A Hypothesis concerning the Opening of the Gulf of Mexico: I O Norton, J O Norton, L Gahagan

1645h T44B-04 Rift to Drift Transition in the Gulf of Mexico: I O Norton, I A Lawyer, J Snedden

1700h T44B-05 A New Tectonic Model for the Gulf of Mexico 230 Ma-180 Ma Based on Stress Map Analysis: H B Hartley, E K Beutel, I Filina, M Liu

1715h T44B-06 Two Extinct Spreading Centers in the Eastern Gulf of Mexico from Integrated Geophysical Analysis: M Liu, I Filina, E K Beutel, H B Hartley

1730h T44B-07 Controls on deformation and sedimentation in the intra-cratonic eastern Gulf of Mexico: A L Weislogel, D Robinson

1745h T44B-08 NEW STRATEGIES FOR STUDYING THE CRUST, LITHOSPHERE, AND TECTONICS OF THE GULF OF MEXICO REGION: R J Stern, G R Keller

T44C (MM) Liberty N-P

Thursday 1600h

Seafloor Geodesy: Measuring Deformation of the Seabed I

Presiding: Martin Heesemann, Ocean Networks Canada; Kelin Wang, Geological Survey of Canada; Yusaku Ohta, Tohoku University; Matthew Cook, University of California, San Diego;

1600h T44C-01 Temporal variation of seafloor movement fields along the Nankai Trough suggested by the GNSS-A: Y Yokota, T Ishikawa
1615h  **T44C-02** Expansion of GPS-Acoustic Arrays offshore the Cascadia and Alaska Subduction Zones: C D Chadwell, D A Schmidt, S C Webb, S L Nooner, T L Ericksen, B A Brooks, J H Foster

1630h  **T44C-03** Recent progresses in GNSS-Acoustic positioning technique and results in the off-Tohoku region, Japan: F Tomita, C Honsho, M Kido

1645h  **T44C-04** Direct path ranging on seafloor: measuring precise and continuous horizontal movement: R Yamamoto, M Kido, R Hino

1700h  **T44C-05** Seafloor geodesy calibration from sidescan sonar surveys of the Ayu Trough: J B DeSanto, D T Sandwell, C D Chadwell


1730h  **T44C-07** A mobile pressure gauge for calibrating pressure sensors on the seafloor with a resolution less than 1 hPa: Y Machida, S Nishida, T Kimura, E Araki

1745h  **T44C-08** Calibrated pressure measurements for seafloor geodesy: M J Cook, G S Sasagawa, M A Zumberge
Session Information

Oral Sessions
Sessions are being held in the Convention Center (CC) and Marriott Marquis (MM)

Poster Sessions
Posters are on display in the following venue throughout the week:
Hall A-C (Poster Hall)

Session & Paper Numbering

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation.
Example: A21A-01 = Atmospheric Sciences, Tuesday, AM, concurrent session A, first paper in that session.

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The program is current as of 06 December 2018. An omitted abstract ID number in the presentation order indicates that the abstract has been withdrawn by the presenter from the session. Please refer to the online program at https://agu.confex.com/agu/fm18/meetingapp.cgi/Home for updates.

Friday A.M.

EP51D  (CC) Hall A-C (Poster Hall)
Friday  0800h

Interactions Between Neotectonics and Surface Processes Along Active Plate Boundaries | Posters  (joint with T)

Presiding: Liang Xue, Oklahoma State University Main Campus; Yann Gavillot, Oregon State University; Janet Watt, USGS Pacific Coastal and Marine Science Center Santa Cruz; Jenna Hill, Coastal Carolina University;

0800h EP51D-1841 POSTER A continuous 13.3-ka record of seismogenic dust events in lacustrine sediments in the eastern Tibetan Plateau: H Jiang, Z Ning, L Yanhao, M Xiaolin, H Xu, W Shi, S Zhang, G Nie
0800h EP51D-1842 POSTER Evolution history of eastwards extrusion in Qiangtang terrane revealed by N-S graben dating, western central Tibet: S Han, H Li, J Pan, H Lu, Y Zheng


0800h EP51D-1847 POSTER Gulf of Aqaba: A new structural model from high resolution multibeam bathymetric data: M Ribot, Y Klinger, S Jonsson, U Avsar, E Pons-Branchu, R Matrau


0800h EP51D-1849 POSTER Temporal and Kinematic insights into the Western Puerto Rico Fault System: M Moul, K S Hughes


0800h EP51D-1852 POSTER Response of ancient inherited structures to new seismic sequence: insides the central Apennines.: Y Panara, M L Cooke, G Toscani, C Perotti, S Seno


0800h EP51D-1854 POSTER Active tectonic influence on the evolution of drainage and landscape in the Kenya Rift, East African Rift System: L Xue, M G Abdelsalam

0800h EP51D-1855 POSTER The modern Icelandic landscape: a record of regional uplift from progressive fluvial erosion histories: G Stucky de Quay, D H Rood, G G Roberts, V M Fernandes

0800h EP51D-1856 POSTER Investigating fault scarpe evolution in jointed bedrock in southwestern Iceland and northern California: C Brigham, J G Crider


0800h EP51D-1858 POSTER Reevaluating seismic hazards from new mapping of the Back Butte-San Joaquin fold-thrust belt, Sacramento-San Joaquin Delta.: Y G Gavillot, S DeLong, A Pickering, A Cyr

0800h EP51D-1859 POSTER The Ups and Downs of the Inner California Borderlands Constrained by Submarine Terraces: B Derosier, N W Driscoll


0800h EP51D-1861 POSTER Integrating high-resolution topography, geochronology, and elemental analyses to constrain the active break-up of a microcontinent: N Brown, S Moon, L Sabbath, J M Stock, A Martin, A Piña-Páez


0800h EP51D-1864 POSTER Morphologic and Structural Variation Along the Offshore Cascadia Margin: Implications for Megathrust Behavior: J T Watt, D S Brothers

0800h EP51D-1865 POSTER Bent out of Shape: Submarine Tectonic Geomorphology in Accretionary Prisms: E Schottenfels, C Regalla


0824h  **T51A-03** Crustal Flow Between the Ordos and Sichuan Blocks in Western China: **H Zhang**, D Ravat

0836h  **T51A-04** Positive Feedback Between West Antarctic Ice Sheet (WAIS) Deglaciation, Decompression-melt Induced Volcanism Revealed by Aeromagnetic and Radar Ice Sounding Surveys and Resultant Sea-level Rise: **J C Behrendt**

0848h  **T51A-05** Thermal structure of the Antarctic lithosphere constrained by 2-decade seismic data: **W Shen**, D Wiens, A Nyblade

0900h  **T51A-06** Enhanced satellite and airborne geophysical imaging of the Antarctic lithosphere: **F Ferraccioli**, J Ebbing, F Pappa, R Forsberg

0924h  **T51A-08** Comparison of magnetic fields from a new satellite model of the lithosphere with magnetic fields predicted from Crust 1.0: **M E Purucker**, N Olsen

0936h  **T51A-09** What Additional Information can Satellite Vertical Gravity Gradients Provide About the Crustal Structure in Oceanic Domains?: **A M Gomez Garcia**, C Meeßen, M Scheck-Wenderoth, G Monsalve, J Sippel, A Bernhardt, G Bernal

0948h  **T51A-10** New insights on the early breakup history of India and east Antarctica based on the interpretation of geophysical data over the major structural high in the Krishna-Godavari offshore, central east coast margin of India: **R Munukutla**, P Sangvai, S R Gangumalla

0800h  **T51B-01** Foredeep Basin Characteristics as a Reflection of Orogenic Style and Regional Dynamic Process: **L Royden**

0815h  **T51B-02** Broken Foreland Basins and Their Connections to Flat-Slab Subduction, Crustal Inheritance, Climate, and Erosional Dynamics: **B K Horton**, K L Butler, T N Capaldi, S W M George, L J Jackson, C Mackaman-Loftland

0830h  **T51B-03** Structural inheritance controlling Southern Pyrenean foreland basin architecture: insights from multi-proxy provenance analysis: **M Odlum**, D F Stockli, K D Thomson, T Capaldi, A Fildani, J D Clark, A de Haller, C Puigdefabregas

0845h  **T51B-04** Timing of clay mineralization in the Central Appalachians and its extended foreland; challenging the orogenic fluid expulsion (“squeegee”) hypothesis.: **B van der Pluijm**, E A Lynch, A Boles

0900h  **T51B-05** Constraining Upland Erodibility and Marine Deposition: Source-to-Sink Sediment Transfer in the Gulf of Papua: **R Garrett**, G Y Brocard, T Salles, P F Rey

0915h  **T51B-06** Paleogene foreland basin formation and Neogene surface uplift in the Peruvian central Andes: **K E Sundell**, J Saylor, T J Lapen, R H Styrton, B K Horton, D P Villarreal, W P Usnayo Perales, J Cárdenas

0930h  **T51B-07** Sedimentary response to exhumation of the central Andean retro-arc foreland during flat slab subduction: **J Saylor**, K Sundell, N Perez, N Karsky, T J Lapen, J Cárdenas

0945h  **T51B-08** Refining the paradigm of fold-and-thrust belt and foreland basin systems: A review of current thinking and new ideas in the Southern Patagonian Andes and Magallanes-Austral Basin: **J C Fosdick**
T51C  (MM) Liberty N-P

Friday  0800h

Shallow Subduction Zone Structure and Dynamics I (joint with G, S, V)

Presiding: Hongfeng Yang, Chinese University of Hong Kong; Douglas Wiens, Washington University in St Louis; Shuichi Kodaira, Yokohama National University; Yan Hu, USTC University of Science and Technology of China;

0800h  T51C-01 Intra-plate seismicity and structure heterogeneity of incoming/subducting Pacific plate along the Japan trench based on the ocean bottom seismograph observations: K Obana, G Fujie, Y Nakamura, T Takahashi, Y Yamamoto, Y Kaiho, S Miura, S Kodaira, M Shinohara

0815h  T51C-02 Impact of post-spreading magmatic activities on the seismic structure of the incoming oceanic plate and its potential implication for the subduction zone: G Fujie, K Obana, Y Yamamoto, T Yamada, T Isse, S Kodaira, S Miura

0830h  T51C-03 Crustal structure of the petit-spot volcanoes on the outer rise of the Japan Trench: A Ohira, S Kodaira, G Fujie, T No, Y Nakamura, S Miura

0845h  T51C-04 Studying Shallow Subduction Zone Processes Using Heat Flow Observations: X Gao, K Wang, M Yamano, Y Kawada, J He

0900h  T51C-05 Investigating the Coupling Between Deformation, Pore Pressure, and Fluid Flow in Subduction Forearcs: T Sun, S M Ellis, D M Saffer

0915h  T51C-06 Change in Paleo-stress at the Toe of Nankai Accretion Prism Off Shikoku Island: Site C0023, IODP Expedition 370: Y Hashimoto, Y Yamamoto

0930h  T51C-07 Linking Paleogeodesy Observations with Geodynamic Models of Megathrust Earthquakes: Implications for Cascadia and Other Megathrust Zones: K P Furlong, M W Herman, R M A Govers

0945h  T51C-08 Massive subduction channels adjacent to Taiwan arc-continent collision: J Suppe, Y H Hsieh, H H Huang, C S Liu, M Le Beon

T51D  (CC) Hall A-C (Poster Hall)

Friday  0800h

Current Understanding of Large Igneous Provinces, Hot Spot Tracks, and Mantle Plumes II Posters (joint with DI, GP, V)

Presiding: William Sager, University of Houston; Anthony Koppers, Oregon State University; Cornelia Class, Lamont-Doherty Earth Observatory; Trond Torsvik, University of Oslo;

0800h  T51D-0171 POSTER Dynamics in East China: insight from a P-wave teleseismic tomography and receiver function analysis: C He, S Dong

0800h  T51D-0172 POSTER Anisotropic full waveform ambient noise and earthquake tomography and Pn analysis of the Ontong Java Plateau and surrounding Pacific upper mantle: A C Hirsch, B Savage, Y Shen

0800h  T51D-0173 POSTER Crustal Structure in Hotspot and Cratonic Environments: a Reappraisal of the H-k Stacking Technique: C S Ogden, I D Bastow, A Gilligan, S Rondenay

0800h  T51D-0174 POSTER The earthquakes of the Western Quebec Seismic Zone and their Relationship with the Great Meteor Hot Spot Track: M Lamontagne, P Brouillette, B A Kjarsgaard

0800h  T51D-0175 POSTER Reykjanes Ridge Evolution by Propagating Small-Scale Convection, Plate Kinematics and a Regional Upper Mantle Anomaly: F Martinez, R N Hey

0800h  T51D-0176 POSTER Implications of Updated Magnetic Anomalies for the Tectonic Evolution of Walvis Ridge: S Thoram, W Sager

0800h  T51D-0177 POSTER Paleomagnetism of the Ore-bearing Intrusions of the Norilsk Region (the Siberian Traps LIP): Correlation with the Volcanic Section and Implications for the Cu-Ni-PGE Deposits Genesis: A Latyshev, R V Veselovskiy, A M Fetisova, V Pavlov

0800h  T51D-0178 POSTER Paleomagnetic Results of the Mesoproarchean Pongola Supergroup Nsuze Large Igneous Province and a Primary Post-Pongola Pole, Kaapvaal Craton, Southern Africa: C Luskin, M de Kock, H Wabo

0800h  T51D-0179 POSTER Linear Magnetic Anomalies Over Tamu and Ori Massifs (Shatsky Rise Ocean Plateau) Imply Formation by Spreading Ridge Volcanism: W W Sager, Y Huang, M Tominaga, J A Greene, M Nakanishi, J Zhang
0800h **T51D-0180 POSTER** The Role of Plate Boundary Geometry and Ridge Processes in the Emplacement of Shatsky Rise: *K Shotorban, J E Georgan*

0800h **T51D-0181 POSTER** Origin and Age of the Researcher Ridge Seamount Chain (Central Atlantic): *J Geldmacher, X Long, K Hoernle, F Hauff, J A Wartho, D Garbe-Schönberg, I Grevenmeyer*

0800h **T51D-0182 POSTER** Mid-Cenozoic Pacific Plate Motion Change: Implications for the Northwest Hawaiian Ridge and Circum-Pacific: *B R Jicha, M O Garcia, P Wessel*

0800h **T51D-0184 POSTER** Age and Isotopic Evidence for the Origin of the Madagascar Plateau, Indian Ocean: *M Storey*

0800h **T51D-0185 POSTER** Pre- and Post-Erosional Estimates of Deccan Lava Volumes: *L Vanderkluysen, N Barber, A E Jay, E Carey*

0800h **T51D-0186 POSTER** Constraints on Deccan Traps eruptive timescales based on high resolution terrestrial mercury chemostatigraphy: *I Fendley, C J Sprain, T Mittal, M C Marvin-DiPasquale, P R Renne, C B Keller*

0800h **T51D-0187 POSTER** Geochemistry of seamount volcanic rocks, eastern margin of the Ontong Java Plateau: *M L G Tejada, T Sano, T Hanyu, J I Kimura, T Miyazaki, Q Chang, B Vaglarov, A A P Koppers, A Ishikawa, S Shimizu, T Tani, M Nakanishi*

0800h **T51D-0188 POSTER** Remelting of the fossil Ontong Java Plateau plume head, with clues to Archean continent formation: *K A Smart, S Tappe, A Ishikawa, J Pfänder, A Stracke*

0800h **T51D-0189 POSTER** Sources of Southern African Large Igneous Provinces: *L D Ashwal*

0800h **T51D-0190 POSTER** Imprints of Volcanism in the Lithosphere Beneath the Malani Igneous Province in Northwestern India: *G Mohan, R Kumar*

0800h **T51D-0191 POSTER** Quantifying Magma Generation Mechanisms of Large-Volume, Heterogeneous Silicic Eruptions in Afro-Arabian Flood Volcanics, Yemen: *J Thines, I Ukstins, D W Peate, D Coulthard Jr, L K S Horkley*

0800h **T51D-0192 POSTER** Tarim Large Igneous Province Constrained by Geodynamic Modelling and Geophysical Observations: *H Liu, G Lei, W Leng, H Zhang*

0800h **T51D-0194 POSTER** Possible residuary lithospheric signature of Permian Emeishan plume from multiscale body-wave finite frequency tomography: *X Liang, Q Wang, Y Chen, S H Hung*

0800h **T51D-0195 POSTER** Effects of rapid plate motion on the Mid-Continental Rift and mantle plume interactions under Pre-Cambrian mantle conditions: *R Moucha, P M Gunawardana, T O Rooney, S Stein, C A Stein*

0800h **T51D-0196 POSTER** Thermochemical Evolution of Mantle Plumes Observed Spatially (TEMPOS): *E C Thompson, E Bredow, N Creasy, K E Godfrey, J Muller, M Xu, C Wang, M Ballmer, S Huang, G Morra, S Mukhopadhyay*

0800h **T51D-0197 POSTER** Lower crustal flow and the generation of high versus low volcanic plateaus: *X Tian, W R Buck*

**T51E (CC) Hall A-C (Poster Hall)**

**Friday 0800h**


**Presiding:** Joann Stock, California Institute of Technology; Brandon Shuck, University of Texas at Austin; Anders McCarthy, University of Bristol; Marco Maffione, University of Birmingham;

0800h **T51E-0198 POSTER** Initiation of the Cascade Arc Following Accretion of the Siletzia Terrane: *J H Tepper*

0800h **T51E-0199 POSTER** Geochronology, geochemistry and significance of the Jiangyema ophiolite in the western YarlungZangbo Suture Zone: *Y Lu, Y Yuan, C Xu, X Zhang, B Xia*

0800h **T51E-0200 POSTER** A new deep seismic structure across the southernmost Mariana Trench: Implications for arc magmatism, initial arc rifting and plate hydration: *K Wan, J Lin, S Xia, J Sun, M Xu, Z Zhou, X Zeng, H Xu*

0800h **T51E-0201 POSTER** Deformation processes in a transtensional mantle shear zone within fore-arc oceanic lithosphere: Mavrovouni shear zone, Pindos Mts, Greece: *B Tikoff, V Chatzaras, M R Drury*

0800h **T51E-0202 POSTER** Arc foundations: a lower crustal record of subduction initiation in the Izu-Bonin forearc: *M P Loocke, J E Snow*

0800h **T51E-0205 POSTER** Conditions of spontaneous subduction at transform faults: **F Garel**, D Arcay, S Lallemand, S Abecassis

0800h **T51E-0206 POSTER** The TROODOS Experiment: Tomography and Receiver function Observations of an Ophiolite using Data Obtained from Seismology: **I D Bastow**, C S Ogden, R Kounoudis, S Plidou, I Dimitriadis, C Venereau, A Gilligan, B Wumuti, C Constantinou


0800h **T51E-0208 POSTER** Crustal structure of the Puysegur Trench from SISIE ocean-bottom seismic refraction data: **H J Van Avendonk**, M Gurnis, S P S Gulick, J M Stock, R Sutherland, B Shuck, E Hightower, J Patel


0800h **T51E-0211 POSTER** Various metamorphism and serpentinization of mafic and ultramafic clasts from the Mariana serpentinite seamounts: **Y Ichiyama**, K Michibayashi, P B Fryer

0800h **T51E-0212 POSTER** Record of asynchronious onset of plate tectonics in different cratons: **M Wang**, S Liu, E Gazel

0800h **T51E-0213 POSTER** Subduction Initiation at the Scotia Sea: Effects of the Thickened Arc Crust: **W Leng**, H Peng

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**T51F (CC) Hall A-C (Poster Hall)**

**Friday 0800h**

**Mountain Building in Collisional and Cordilleran Orogenic Systems III Posters** (joint with EP, G, S, V)

**Presiding:** Chelsea Mackaman-Lofland, University of Texas at Austin; Jean-Baptiste Ammirati, University of Chile; Magali Riesner, Institut de Physique du Globe de Paris; Robert Porritt, University of Texas at Austin;

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0800h **T51F-0214 POSTER** Structure, gravimetry and tectonic analysis of the Preandean Depression-Cordillera de Domeyko border (22°38'-23°15'S): **S A Bascunan**, A Maksymowicz, F Martínez, J Becerra, C Arriagada, M A Peña Gomez, I Gómez


0800h **T51F-0216 POSTER** Extension and Lithosphere Dynamics in the Andes inferred from the 2016 Parina (Huarincheancara) Earthquake: **S E Wimpenny**, A Copley, C L B Escobar

0800h **T51F-0217 POSTER** Preliminary investigations into fluid inclusion chemistry, orientation, and entrapment conditions during mylonitization of the Cordillera Blanca Detachment Fault: **T A Grambling**, C A Shaw, M J Jessup, D L Newell

0800h **T51F-0218 POSTER** Exhumation of the Fitz Roy Granite: How Efficient are the Mantelic and Glaciations Processes?: **C Sue**, N Stalder, M Ghiglione, J Martinod, F Herman, M Salze

0800h **T51F-0219 POSTER** Present-day Uplift of the European Alps: Mechanisms and Relative Contributions: **C Sue**, P Sternaï, L Husson, E Serpelloni, C Faccenna, T W Becker, A Walpersdorf

0800h **T51F-0220 POSTER** Timing and tectonic significance of a back-arc unit in the accretionary Qinling orogen, central China: **P Hu**, Y Wu, W Zhang, Y He

0800h **T51F-0221 POSTER** Links between Mountain Building and Non-Steady State, Heterogeneous Orogenic Crustal Development at Multiple Scales: Insights from the Cretaceous Central Sierra Nevada Arc: **M A Maksymowicz**, F Martínez, J Becerra, C Arriagada, M A Peña Gomez, I Gómez

0800h **T51F-0222 POSTER** Thermo-kinematic Modeling of Arc Magma Generation through Partial Melting of Underthrust Crust: **J Yang**, W Cao

0800h **T51F-0223 POSTER** A Reflection Seismic Look Below the Caledonian Front in Northern Sweden: Shear Zones and Dolerites?: **C Juhlin**, P Hedlin, J Majka

0800h **T51F-0224 POSTER** Tectonometamorphic evolution of the Southern and Central Menderes Massif, western Turkey: **T M Etzel**, E J Catlos, E D Kelly, I Cemen, K R Atakturk, C Ozerdem

0800h **T51F-0225 POSTER** The Quest for Entrained Continental Crust Beneath Tibet: **W P Chen**, Y Jiang
Tectonophysics: AGU Fall Meeting 2018

0800h **T51F-0226 POSTER** Collisional and Subduction-related Tectonics on the Neogene Building of the Northern Colombian Andes: S Leon, A Cardona, G Monsalve, M Parra, J S Jaramillo, V Valencia

0800h **T51F-0227 POSTER** GEOLOGY OF THE BUEM OPHIOLITE: A RECORD OF ACCRETIONARY TECTONICS DURING THE PAN-AFRICAN OROGENY.: J Lehmann, D Kwayisi, M Elburg

0800h **T51F-0228 POSTER** Seamount collision related deformation in convergent margins; Azuero Peninsula, Panama: C G Ortiz, C Montes

0800h **T51F-0229 POSTER** Application of quartz crystallographic preferred orientation analysis to estimate deformation temperature and shear sense in high-pressure metamorphic rocks in Crete, Greece: J M Rahl, J Willey

0800h **T51F-0230 POSTER** Eocene to Miocene paleotopographic evolution in southern Patagonian Andes recorded by leaf-wax biomarker hydrogen isotope: Q Chang, M T Hren, M T Brandon, J C Fosdick, R A VanderLeest, J E Bostelmann, R Ugalde

0800h **T51F-0231 POSTER** Investigating the role of rift inheritances during early orogeny in the Oman belt: M Emmanuel, M Buisson, M Ducoux, J Tugend, F Chauvet, M Rousseau, S Callassou

0800h **T51F-0232 POSTER** DIACHRONOUS INITIATION OF POST-COLLISIONAL MAGMATISM IN THE ARABIA-EURASIA COLLISION ZONE: Y C Lin, S L Chung, A F Bingöl, A Okrostsvardizde, L Yang, T H Lin, H Y Lee

0800h **T51F-0233 POSTER** A Mesoproterozoic cordilleran orogen recorded by the Kunene Anorthosite Complex in Angola: J Lehmann, G M Bybee, B Hayes, T Owen-Smith

0800h **T51F-0234 POSTER** Did Paleozoic Orogeny in the Central Appalachian Piedmont Province Occur Via Accretion of an Exotic Terrane?: A J Martin, H Bosshyshell

0800h **T51F-0235 POSTER** Petrology and REE potential of mid-Cretaceous alkaline intrusive rocks in the Darby Mountains, Seward Peninsula, Alaska: S Karl, E Drewes, D Kreiner, G Case, S E Box, A Pongratz, A Allard

0800h **T51F-0236 POSTER** Results on Core-Log-Seismic-Integration in hard-rock environments using the ICDP drilling project COSC-1, Sweden: J Elger, C Berndt, F Kästner, S Pierdominici, J Kueck

0800h **T51F-0237 POSTER** Structural evolution of basins in the Tien Shan: the example of the Jumgal basin, Kyrgyzstan: J Coddington, R J Burgette

0800h **T51F-0238 POSTER** Understanding the Structural Evolution in the Central Bolivian Andes: An Integrated Flexural, Thermo-Kinematic, and Landscape Modelling Approach: V M Buford Parks, N McQuarrie

0800h **T51F-0239 POSTER** Mid-Cretaceous epeirogenic uplift of the Iranian Plateau revealed by white mica $^{40}\text{Ar}/^{39}\text{Ar}$ thermochronology: A Malekpour-Alamdari, J van Wijk

0800h **T51F-0240 POSTER** Factors controlling topography at ocean-continent convergent margins using 2D numerical models: M C Kerr, D R Stegman, A E Pusok

0800h **T51F-0242 POSTER** Unraveling the Construction of the Northern Puna Plateau: How and When was it Formed?: S Henriquez, P G DeCelles, B Carrapa

0800h **T51F-0243 POSTER** Variably mixed meteoric and metamorphic fluid sources during fold-thrust belt formation revealed by O-H isotopic analysis of dated fault gouge in the Canadian Rockies: E A Lynch, D Pana, B van der Pluijm

0800h **T51F-0244 POSTER** Spatial and Temporal Patterns in Rock Uplift from Analysis of River Profiles, Southern Peru: J S Leonard, K X Whipple

0800h **T51F-0246 POSTER** Was the Alleghanian Suture a Strike-Slip Boundary?: J H Knapp, D J Herman

**T51G (CC) Hall A-C (Poster Hall)**

**Friday 0800h**

**Multiscale Processes Influencing Tectonics and Earthquakes at Plate Boundary Fault Systems II Posters (joint with G, NG, NH, S)**

**Presiding:** Maureen Walton, U.S. Geological Survey; Yehuda Ben-Zion, University of Southern California; Estelle Chaussard, University of California; Andrea Donnellan, NASA Jet Propulsion Laboratory;

0800h **T51G-0247 POSTER** A Gas Hydrate Site with Bifurging Detachment and Trishear Folds in the Outer Wedge Offshore SW Taiwan: An Example of Mechanical Compaction and Methane Flow: R Bernal-Olaya, W C Chi, P Kunath, J Sanchez, C Berndt, B Higgs

0800h **T51G-0248 POSTER** Well Log Data to Infer Geophysical Features of Shallow Crust: Some Examples in Italy: P Montone, M T Mariucci

0800h **T51G-0249 POSTER** High-resolution imaging of the Ivrea Geophysical Body: A joint seismic and gravity approach: M Scarponi, G Hetényi, J Plomerova, S Solarino, T Berthet, L Baron
0800h **T51G-0250 POSTER** Field geophysical investigations of the Blue Mountains uplift, northeastern Oregon: **L Staishch**, K F Wetzel, S E K Bennett, R J Blakely, A P Lamb, T Earney

0800h **T51G-0251 POSTER** Detection of the seismic structural variation around regions with slow earthquakes in southwest Japan using the receiver function method: **Y Sawaki**, Y Ito, K Ohta, T Shibutani, T Iwata

0800h **T51G-0252 POSTER** Thick- versus thin-skinned tectonics in the continental collision zone of the Zagros Fold-and-Thrust Belt from crustal delay time imaging with seismicity and receiver functions: **V Schulte-Pelkum**, E Karasozen, E Bergman, A Ghods, K Motaghi

0800h **T51G-0253 POSTER** A bias-free seismicity catalog for the entire Zagros (Iran) orogeny: **E Karasozen**, E Nissen, E Bergman, A Ghods

0800h **T51G-0254 POSTER** Dynamic Models of Ellipsoidal Data from Shear Zones: **J R Davis**, S Titus, V Chatzaras

0800h **T51G-0255 POSTER** Numerical simulations of stress variations with depth in a model for the San Jacinto fault zone: **N Abolfathian**, C W Johnson, Y Ben-Zion

0800h **T51G-0256 POSTER** Joint analysis of seismic, geologic, resistivity and topographic data collected within the San Jacinto fault zone trification area near Anza, California: **P E Share**, P Štěpančíková, P Taborík, J Stemberk, T K Rockwell, A Wade, R Arrowsmith, A Donnellan, F Vernon, Y Ben-Zion

0800h **T51G-0257 POSTER** DEM modelling of the Tertiary Deformation of the Pamir and adjacent blocks: **P Nanjundiah**, P Tapponnier, L Jiao, S Barbot

0800h **T51G-0258 POSTER** Deformation in Wide Transform Systems: An Example from Northern Iceland: **S Titus**, S Waag-Swift, N Hummel, J R Davis

0800h **T51G-0259 POSTER** Distribution of Secondary Faulting and Deformation Patterns Along the Queen Charlotte Fault, Southeastern Alaska: **M A L Walton**, D S Brothers, N C Miller, J Kluesner, P J Haeussler

0800h **T51G-0260 POSTER** Sedimentation in Response to Glacial Retreat in Icy Bay from Late Holocene to Present.: **R Mutsune**, R Reece, M A L Walton, S P S Gulick, P J Haeussler, N McCall

0800h **T51H-0261 POSTER** Integrating thermochronometric and geologic data to develop a new structural model for large-magnitude extension in central Death Valley, CA: **T M Szemore**, I Cemen, M M Wielicki, M T Heizler, D F Stockli, D Robinson

0800h **T51H-0262 POSTER** Crustal Seismic Anisotropy of the Ruby Mountains Core Complex and Surrounding Northern Basin and Range: **J T Wilgus**, C Jiang, B Schmandt


0800h **T51H-0264 POSTER** Quantifying the Link Between Southwestern North America Paleo-dynamic Evolution and Basin and Range Extension History within the Pacific-North America Plate Boundary Zone since the Oligocene: **A Bahadori**, W E Holt

0800h **T51H-0265 POSTER** Plate Tectonic Evolution of the Gulf of Mexico: **A Garcia-REYES**, J Dyment

0800h **T51H-0266 POSTER** Crustal thickness and Moho topography across the Texas-Gulf of Mexico margin from seismic interferometry: **J S Thangraj**, D Quiros, J Pulliam

0800h **T51H-0267 POSTER** Tracking the Tectonic Evolution of the Mexican Jurassic Arc: Paleogeographic insights from Paleomagnetism: **L A Rodriguez-Parra**, R S Molina-Garza

0800h **T51H-0268 POSTER** Kinematic parameters and crustal building blocks for the greater Gulf of Mexico: **D A Minguez**, E G Hensel

0800h **T51H-0269 POSTER** Analysis of the Magnetotelluric Profile Data from the Española Basin, New Mexico: **K Pratscher**, J Grab, T Wang, R Chi-Duran, D W Feucht, P Bedrosian, L Pellerin
0800h **T51I-0270** *POSTER* Subsurface structures along the western Yucatan from integrative geophysical analysis: **I Filina**, L Hartford


0800h **T51I-0272** *POSTER* Improved Rayleigh wave group velocity estimates across the southeastern United States via double beamforming: **D Barman**, J Pulliam, D Quiros

0800h **T51I-0273** *POSTER* Along strike magmatic variations in the Colombian Andes during the Miocene: Tectonic implications: **J S Jaramillo**, A Cardona, G Monsalve, V Valencia, S Hincapie, S Leon


0800h **T51I-0275** *POSTER* ISOSTASY OF EASTERN TIBET PLATEAU: **H Singh**, R Mahatsete

0800h **T51I-0276** *POSTER* What controls normal faulting earthquakes' maximum magnitude?: **J S Neely**, S Stein

0800h **T51I-0277** *POSTER* Mantle contribution to ultra-high temperature metamorphism and melting during long-hot orogens: **D Willis**, K A O'Farrell, D P Moecher

**T51I (CC) Hall A-C (Poster Hall)**

**Friday 0800h**

**Subduction Zone Processes at the Hikurangi Margin, New Zealand III Posters** *(joint with G, NH, S)*

*Presiding:* Laura Wallace, GNS Science; Rebecca Bell, Imperial College London; Kimihiro Mochizuki, University of Tokyo; Demian Saffer, Pennsylvania State University;

0800h **T51I-0278** *POSTER* HIGH P-WAVE SPEEDS IN THE UPPER MANTLE AND THEIR POSSIBLE ASSOCIATION WITH SUPER PLUMES: **J D P Moore**, T A Stern, S H Lamb, K Mochizuki, K Gohl, K Hochmuth, P Herath, D A Okaya

0800h **T51I-0279** *POSTER* Understanding subduction dynamics in the Southwest Pacific: **D Peng**, L Liu, J Hu

0800h **T51I-0280** *POSTER* Seismicity Patterns in the Northern Taupo Volcanic Zone at the Transition to Back-Arc Spreading: **D Murekezi**, T Q H Pham, C Leibensperger, R J Gallacher, H J Zal, F Lutz, R Franks, S Treweek, C Ebinger, M K Savage, J D Eccles

0800h **T51I-0281** *POSTER* Velocity structure and relocated aftershocks in the Kāikōura to Palmerston region, New Zealand, from body-wave seismic tomography: **F Lanza**, D M Eberhart-Phillips, C H Thurber, C J Chamberlain, K Jacobs, E Warren-Smith, M K Savage

0800h **T51I-0282** *POSTER* Adjoint Tomography of the Hikurangi Subduction Zone and New Zealand's North Island: **B Chow**, Y Kaneko, V Silwal, C Tape, J Townsend


0800h **T51I-0286** *POSTER* Conjugate Strike Slip Faulting Associated with Seamount Subduction at the Hikurangi Deformation Front, New Zealand: **S R Davidson**, P Barnes, J R Pettinga, A Nicol Prof, J J Mountjoy, S A Henrys

0800h **T51I-0287** *POSTER* Seismic Depth Images and Velocity Models at the Southern Hikurangi Subduction Margin: Insights into Emergent Deformation and Dewatering: **I A Pecher**, G J Crutchley, D Klaeschen, S A Henrys

0800h **T51I-0288** *POSTER* Deciphering Shifts in Faulting, Sedimentation, and Stress State in the Southern Hikurangi Accretionary Prism Using Structural Interpretation of Seismic Reflection Data: **G W Tate**

0800h **T51I-0290 POSTER** Crustal and Upper Mantle Structure of Southern Hikurangi Margin from Onshore-Offshore Active Source Data: P Herath, T A Stern, M K Savage, S Henrys, D Bassett

0800h **T51I-0291 POSTER** What Causes the Variations in Shear Wave Splitting Measurements; An Account From Empirical and Numerical Studies: K M Graham, M K Savage, R Arnold, H J Zal


0800h **T51I-0294 POSTER** Utilizing coastal-reflected tsunami waves observed by the ocean bottom pressure gauges to improve offshore earthquake source parameters: Application to the 2016 Te Araroa earthquake, New Zealand (Mw 7.0): T Kubota, T Saito, Y Ito, Y Kaneko, L Wallace, S Suzuki, R Hino, S A Henrys


0800h **T51I-0296 POSTER** The Role of Seamount Subduction on Shallow Slow Slip Distribution, Northern Hikurangi Margin, New Zealand: D H N Barker, S A Henrys, F Caratori Tontini, D Bassett, L M Wallace, P Barnes, E Todd

0800h **T51I-0297 POSTER** Validating a full-waveform inversion velocity model at the north Hikurangi subduction margin using IODP drilling data: R E Bell, M Gray, J V Morgan, S A Henrys, D H N Barker, N L Bangs, P Barnes, L M Wallace, D M Saffer, K E Petronotis

0800h **T51I-0298 POSTER** Structure, physical characteristics and fault slip behaviors along the southern Hikurangi subduction zone derived from seismic full waveform imaging: A F Arnulf, J Biemiller, D Bassett, L M Wallace, S A Henrys, G J Crutchley, I A Pecher, L Lavier

0800h **T51I-0299 POSTER** Numerical modeling of dynamically triggered shallow slow slip events in New Zealand by the 2016 M w 7.8 Kaikoura earthquake: M Wei, Y Kaneko, P Shi, Y Liu

0800h **T51I-0300 POSTER** Frictional behavior of incoming sediment in the Hikurangi subduction zone at in-situ PT conditions: H S Rabinowitz, H M Savage, S Shreedharan, M Ikari, F Meneghini, Y Ito, H Kitajima, L M Wallace, D M Saffer, K E Petronotis


0800h **T51I-0304 POSTER** Subduction-Related Strain in a Calcareous-Pelagic Shear Zone: Insights on Deformation at the Hikurangi Margin Plate Interface from the Input Sequence at Site U1520 and the Llanddwyn Island Shear Zone, Anglesey, U.K.: H R Leah, A Fagereng, F Meneghini, J Morgan, H M Savage, M Wang, D M Saffer, L M Wallace, K E Petronotis


0800h **T51I-0306 POSTER** Compactive deformation in the incoming sedimentary section of the Hikurangi Subduction Margin, New Zealand: Constraints from seismic reflection data and IODP cores: M Wang, P Barnes, J Morgan, R E Bell, A Fagereng, H M Savage, D M Saffer, L M Wallace, K E Petronotis


0800h T51I-0311 POSTER High-resolution seafloor imaging of the diverse North Hikurangi Margin, including the creeping and catastrophic North Tuaheni Landslide: J Edwards, N L Bangs, S Han, D H N Barker, T Harold, T J Reston, R Arai, S M Ball, M Gray, H R Leah, H Tilley, J Kluesner, E A Silver


0800h T51I-0314 POSTER Occurrence and saturation of free gas and gas hydrate at complex tectonic and interbedded reservoir in the Hikurangi Margin, New Zealand: X Wang, B Liu
0800h **T51J-0323** *POSTER* Breaking Cascadia’s Silence: Machine Learning Reveals the Constant Chatter of the Megathrust: B Rouet-Leduc, C Hubert, P A Johnson

0800h **T51J-0324** *POSTER* Superfast Propagation of Slow Slip Rupture: E Fukuyama, F Yamashita, S Xu

0800h **T51J-0326** *POSTER* An Aseismic Slip Episode in 2016 Near The Southern End of Longitudinal Valley Fault (LVF) in Taiwan: Y Li, Y Tian, J Liu, J Zhang, Y Luo

0800h **T51J-0327** *POSTER* Reviewing the electrical properties and its implication of the creeping Chihshang Fault with magnetotelluric and High-Resolution Electrical Resistivity Imaging measurements: P Y Chang, G R Ho

0800h **T51J-0328** *POSTER* Depth variations of fault friction parameter derived from dynamic modeling of GPS afterslip associated with the 2003 Mw 6.5 Chengkung earthquake in eastern Taiwan: J C Lee, Z Y C Liu, M Shirzazi

0800h **T51J-0329** *POSTER* Fault mechanism in active creeping Chihshang fault, Taiwan: W J Wu, L W Kuo, J C Lee, C S Ku, W J Huang, J J Dong, H S Sheu, H S Sheu

0800h **T51J-0330** *POSTER* Time-dependent aseismic slip from repeating earthquakes along the Longitudinal Valley fault in Taiwan: Y Chen, K H Chen

0800h **T51J-0331** *POSTER* Seasonal Modulation of Deep Slow-slip and Earthquakes on the Main Himalayan Thrust: D Panda, B Kundu, V K Gahalaut, R Burgmann, B Jha, R Asaithambi, R K Yadav, N K Vissa, A Bansal

0800h **T51J-0332** *POSTER* Surface creep along the East Anatolian Fault: Z Cakir, S Ergintav, S Cetin, S Senturk, A Ozdemir, U Dogan, H Karabulut, F Saroglu, U Dikmen, R G Bilham, W Julaite, H Ozener

0800h **T51J-0334** *POSTER* Corrections of Unwrapping Errors, Tropospheric and Ionospheric Effects on SAR Interferometry: Application to the Central Segment of the North Anatolian Fault: A Benoit, R Jolivet, B Pinel-Puyssegur, H Fahadi, Z Cakir

0800h **T51J-0335** *POSTER* Thermal Gradient Controlled Creeping Behavior of the Central Philippine Fault on Leyte Island Revealed by SAR Interferometry: M C Tsai, Y Ying-Hui, J C Hu, M Aurelio

0800h **T51J-0336** *POSTER* Coulomb Stress Changes by Long-term Slow Slip Events in the Southcentral Alaska Subduction Zone: A Mahanama, Y Fu, Z Liu, J Freymueller, R Burgmann

0800h **T51J-0337** *POSTER* Coseismic ruptured creeping Guanxian-Anxian fault during the 2008 Mw 7.9 Wenchuan earthquake (China): H Li, X He, H Wang, J Si, L Zhang, G Di Toro

0800h **T51J-0338** *POSTER* Carbonaceous materials in the fault zone of the Longmenshan fault belt: Records of seismic slip from trench and implications for faulting mechanism: J Si, H Li, J R. Huang, S R Song, J Pei, H Wang, J N Fang, H S Sheu

0800h **T51J-0339** *POSTER* Mechanical controls on the distribution of earthquake afterslip from fault zone drilling and laboratory testing: J Nevitt, B A Brooks, D A Lockner, D E Moore, R Catchings, C Criley

0800h **T51J-0340** *POSTER* Role of Dilatant Hardening on Stabilization of Fault Slip in Experimentally Deformed Permeable Rocks: T Kanaya, W Zhu

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**V51A (MM) Liberty I-K**

**Friday 0800h**

**Storage, Cycling, and Environmental Consequences of Magmatic Volatile Transfer from the Mantle to the Atmosphere I** (joint with DI, OS, PP, T)

**Presiding:** Tobias Fischer, University of New Mexico Main Campus; Benjamin Black, CUNY City College of New York; Taryn Lopez, University of Alaska Fairbanks; James Muirhead, ;

0800h **V51A-01** The oxidation state of sulfur in lunar and terrestrial apatite: M N Brounce, J Boyce, F M McCubbin, J Humphreys, J J Reppart, E Stolper, J M Eiler

0815h **V51A-02** Delivery of deep-sourced, volatile-rich plume material to the global ridge system: S A Gibson, M A Richards

0830h **V51A-03** Neogene to present changes in CO2 sources and sinks due to the growth and tectonic evolution of Indonesia: E Anttila, S J LoBianco, A R Brenner, F A Macdonald

0845h **V51A-04** Tectonic Control of the Carbon Cycle and Climate: Resolving the Effects of Global Spreading-Rate Variations with High Temporal Resolution over the Past 20 Myr: C A Dalton, T Herbert

0900h **V51A-05** The dynamic role of volatiles in igneous systems: a perspective from reactive transport modeling: T Keller, J Suckale

0915h **V51A-06** Punctuated or sustained? Estimates of the CO2 output of explosive volcanic eruptions: M Edmonds, J Biggs, C M Vidal
0930h **V51A-07** Volcanic gases include slab- and air-derived nitrogen but no contributions from the mantle: a $^{15}$N/$^{14}$N perspective: J LaBidi, P H Barry, B Marty, T P Fischer, T Giunta, B Sherwood Lollar, E D Young

0945h **V51A-08** Tree rings as a volcanic gas proxy: carbon and sulfur isotopes in proximal trees linked to volcanic degassing fluctuations through time: F D’Arcy, E Boucher, M J de Moor, J F Helie, J Stix, R Piggott

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**T52A  (MM) Liberty M**

**Friday  1020h**

**Chronologic Constraints on the Processes and Tempos of Orogenesis Archived in Sedimentary Basins I**

*Presiding: Andrea Stevens Goddard*, Rowan University; *Ryan Leary*, New Mexico Institute of Mining and Technology; *Adam Forte*, Louisiana State University;

1020h **T52A-01** Geochronological and Hf Isotopic Studies on the Meso–Neoproterozoic Sedimentary Rocks in the Chinese Central Tian Shan Block: Insights into Switching Process from Nuna Breakup to Rodina Assembly: **Z Huang**, X Long, C Yuan, Y Zhang, L Du

1035h **T52A-02** The origin of Cuyania revealed by Hf isotopes of zircon: **E L Martin**, W J Collins, C J Spencer, S Finney

1050h **T52A-03** Detrital Zircon Geochronology and Geochemistry of Australian Neoproterozoic Basins, and Implications for Proterozoic Orogenesis: **C Verdel**, M J Campbell, C Allen, J Ward

1105h **T52A-04** Shallow Mantle Convection Beneath West Africa, Solid Sedimentary Flux to the Mauritanian Basin and Continental Uplift Histories from Drainage Inversion: **B H Lodhia**, G G Roberts, A Fraser, J Jarvis


1135h **T52A-06** Cretaceous foreland eustasy, eustasy, and climate from continental shelf and distal sections, Arctic Alaska: **R O Lease**, D W Houseknecht, A R Kylander-Clark, K J Whidden, J A Dumoulin

1150h **T52A-07** Documenting sediment recycling during Andean mountain building using combined U-Pb geochronology and Lu-Hf geochemistry of detrital zircons from Peruvian Altiplano strata: **K E Sundell**, J Saylor, M Pecha

1205h **T52A-08** Andean deformation and foreland basin evolution during Neogene changes in subduction zone geometry (32-33°S): Insights from zircon U-Pb geochronology and apatite (U-Th)/He thermochronology: **C Mackaman-Lofland**, B K Horton, F Fuentes, K N Constienius, D F Stockli, T Capaldi, P Orozco, P M Alvarado

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**T52B  (MM) Independence D**

**Friday  1020h**

**Seismotectonic Processes Along Active Latin American Margins: Earthquakes and Aseismic Signatures I**

*Presiding: Jorge Jara*, Ecole Normale Supérieure Paris; *Mathilde Radiguet*, University Grenoble Alpes; *William Frank*, University of Southern California; *Sergio Ruiz*, Universidad de Chile;

1020h **T52B-01** A Tale of Three Earthquakes: Slip History and Seismic – Aseismic Interaction Along the Mexico Subduction Zone from 2012 to the 2018 M, 7.2 Pinotepa Earthquake: **S E Graham**, C DeMets, E Cabral-Cano, L Salazar-Tlacazni

1040h **T52B-02** Single station tectonic tremor detection using the Mexican National Seismological Service permanent stations: **A L Husker**, W B Frank, G Gonzalez, L Avila, V Kostoglodov, E Kazachkina


1110h **T52B-04** Aftershocks of the 2016 Mw 7.8 Ecuador Earthquake Reveal Earthquake Cycle is Controlled by Long-Lived Structures: **H Agurto-Detzel**, Y Font, P Charvis, A P Alvarado, D Ambrois, S L Beck, M Hoskins, S Leon Rios, C Lynner, A Meltzer, J M Nocquet, M M Regnier, A Rietbrock, F Rolandone, M C Ruiz, L Soto-Cordero

1125h **T52B-05** Heterogeneous interseismic coupling along the Peruvian subduction zone, rigid motion of the Peruvian forearc sliver and Subandean shortening accommodation: **J C Villegas-Lanza**, M Chlieh, O Cavalié, H Tavera, P Baby, J Chire, J M Nocquet

1140h **T52B-06** Precursory slow slip events of the 2014 Iquique Earthquake from long-base tilt and GPS records: **C Vigny**, F Boudin, P Bernard, G Meneses, M Olcay, C Tassera, J P Boy, E M Aissouli, M Metois, C Satriano, M F Esnoult, A Nercessian, M Vallée, J P Vilotte, C Brunet
1155h T52B-07 Implication of the 1960 Mw=9.5 Valdivia, Chile, Earthquake and the Mw=7.7 Aysén Slow Earthquake for slip Partitioning along the South Chile Subduction zone: H Kanamori, L A Rivera

T52C (MM) Liberty N-P

Friday 1020h

Shallow Subduction Zone Structure and Dynamics II (joint with G, S, V)

Presiding: Hongfeng Yang, Chinese University of Hong Kong; Douglas Wiens, Washington University in St Louis; Shuichi Kodaira, Yokohama National University; Yan Hu, USTC University of Science and Technology of China;


1035h T52C-02 Characteristics of Japan Trench shallow megathrust revealed by deep-sea researches: R Hino, S Kodaira, T Kanamatsu, M Shinohara, Y Ito


1105h T52C-04 Rupture to the trench? Frictional properties of incoming sediments at the Cascadia subduction zone: C Seyler, J D Kirkpatrick, T Hirose, H M Savage

1120h T52C-05 The impact of shallow rheological transition along the subduction plate interface on tremor and earthquake nucleation: P Vannucchi, A P Clarke, J P Morgan, A Ougier-Simonin

1135h T52C-06 Quantifying seismic hazard from interseismic locking distribution along the subduction megathrust: H Yang, S Yao, B He, A V Newman

1150h T52C-07 Using coupled models of the 2004 Sumatra-Andaman earthquake and Indian Ocean tsunami to examine the impact of fluid pressure and megathrust geometry: E Madden, S Vater, T Ulrich, L Rannabauer, A A Gabriel

1205h T52C-08 Three-dimensional finite element model of the viscoelastic postseismic deformation of the 1964 Mw9.2 Alaska earthquake: K Huang, Y Hu, J T Freymueller

1020h T52D-01 Investigating the Role of Underplating and Mantle Plumes in the Midcontinent Rift Using Vp and Vp/Vs Tomography: E M Golos, H Fang, A Boyce, A E Foster, F A Darbyshire, R D van der Hilst

1035h T52D-02 Imaging the Farallon Slab and other Upper-Mantle Structure under USArray using Long-period Reflection Seismology: P M Shearer, J S Buehler

1050h T52D-03 A thin lithosphere and steep lithosphere-asthenosphere boundary beneath the central Appalachian Mountains: Constraints on seismic attention using MAGIC Array data: J S Byrnes, M Bezada, M D Long, M H Benoit

1105h T52D-04 From the Archean craton to the Mesozoic Cordilleran orogen: new crustal seismic constraints of the Western Canada Sedimentary Basin from ambient noise tomography: Y J Gu, Y Chen

1120h T52D-05 Transition Zone Structure Beneath the Eastern US: S Liu, J C Aragon, M Benoit, M D Long, S D King

1135h T52D-06 Lithospheric Layering in the North American Craton from Anisotropic Full Waveform Inversion: B A Romanowicz, H Karaoglu, S Maurya, C Roy, C Pierre, T Bodin

1150h T52D-07 Mapping the Thickness of Thermal Lithosphere Across the Continental US: R C Porter, S van der Lee

1205h T52D-08 Heat Flow Data and Seismic Imaging Reveal Both Transient and Steady-State Thermo-Mechanical Processes at Work Beneath Southern California: W R Thatcher, D S Chapman
New Insights into Oceanic Spreading Centers from Seafloor Observatories I (joint with B, OS, S, T)

Presiding: Christian Baillard, School of Oceanography, University of Washington; Thibaut Barreyre, K.G.J. Centre for Deep Sea Research, University of Bergen; Marjolaine Matabos, IFREMER; David Butterfield, University of Washington, NOAA/PMEL;

1020h V52B-01 Constraining Permeability of Fast-spreading Upper Crust: Estimates From Seismic Velocity and Poroelastic Response at the L-vent Site (East Pacific Rise): M Marjanovic, J Escartin

1035h V52B-02 Spatial, Temporal and Size-Frequency Characteristics of Microearthquake Sequences Leading up to the 2015 Eruption of Axial Seamount: D R Bohnenstiehl, D P Sprinkle II, C Baillard, P A Moyer, M S Boettcher

1050h V52B-03 Tracking salt and magmatic gas in two hydrothermal observatories in the NE Pacific: D A Butterfield, M D Lilley

1105h V52B-04 Exploring Diffuse Temperature Flow, Seismicity, and Tidal Pressure Controls on Flocculation Events at Axial Seamount: E Pesar, E Tesin, D C Soule, T J Crone, F Knuth

1120h V52B-05 Coupled stability and change in hydrothermal fluid chemistry during a quarter century at 9°50’N East Pacific Rise: J M McDermott, D J Fornari, J G Bryce, M F Fahnestock, T Barreyre, J Seewald, K L Von Damm, M D Lilley

1135h V52B-06 Characterizing the geologic setting of popping rocks: Preliminary results from the 2018 Popping Rocks cruise to the Mid-Atlantic Ridge: E L Mittelstaedt, M D Kurz, V D Wanless, S A Soule, M Jones, K E Fauria, J Curtice, D M Schwartz

1150h V52B-07 A NOVEL APPROACH TO THE STUDY OF ACTIVELY ERUPTING SUBMARINE VOLCANOES ON EARTH AND BEYOND: J R Delaney, D Manalang, K L Daly, W S D Wilcock

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<td>Reassessment of the late Quaternary slip rate of the Shuanghu graben, central Tibet</td>
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<td>J Buscher, D Morata, C Cannatelli, D Moncada, G Arancibia, L Daniele</td>
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<td>Differences Between Cordilleran Models and Real Margins: Impact of Structural Inheritance and Dynamic Topography on Basin Evolution in the Central Andes, Southern Peru</td>
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<td>Are cordilleran or collisional orogens really distinct? New views from a quantitative re-evaluation of mountain-building in the Central Andes</td>
<td>M Simoes, M Riesner, R Lacassin, D Carrizo, T Habel, R Armijo</td>
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**T53B** (MM) Liberty L  
**Friday 1340h**  

**Structure and Dynamics of the Upper Mantle: Characterizing the Lithosphere–Asthenosphere System from Crust to Transition Zone II** *(joint with DI, MR, S, V)*  

*Presiding:* Claire Currie, University of Alberta; Vedran Lekic, University of Maryland; Jolante van Wijk, New Mexico Institute of Mining and Technology; Andrew Schaeffer, University of Ottawa;  

1340h **T53B-01** Mantle structure and dynamics under the continuous United States inferred from tomographic imaging of radially anisotropic shear velocity: R W Porritt, T W Becker, L Boschi, L Auer  
1355h **T53B-02** Resolving Thick Thermal Lithosphere beneath the Southeastern United States: The Importance of Anelasticity in Synthesizing Seemingly Contradictory MT and Seismic Results: B S Murphy, G D Egbert  
1425h **T53B-04** P and S wave velocity structure of the upper mantle beneath southern Africa constrained by new data from Botswana: A Nyblade, K Ortiz, M van der Meijde, H Paulsen, T Kwadiba  
1440h **T53B-05** African cratonic lithosphere carved by mantle convection: N L Celli, S Lebedev, A J Schaeffer, C Gaina  
1455h **T53B-06** Seismological Evidence for an Asthenospheric Connection between La Réunion Plume and the Central Indian Ridge: G Barruel, K Siglach, J R Scholz, A Mazzullo, E Stutzmann, J P Montagner, F R Fontaine, L Michon, C Deplus, J Dyment  
1510h **T53B-07** The Effect of Partial Melting on Seismic Wave Propagation in the La Réunion Mantle Plume.: T Franken, J J Armitage, N Fuji, A Fournier  
1525h **T53B-08** The lithosphere structure of the North China Craton: based on seismic, thermal and gravity data: B Xia, I M Artemieva, H Thybo

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**T53B** (MM) Liberty N-P  
**Friday 1340h**  

**Subduction Zone Processes at the Hikurangi Margin, New Zealand** *(joint with G, NH, S)*  

*Presiding:* Laura Wallace, GNS Science; Rebecca Bell, Imperial College London; Kimihiro Mochizuki, University of Tokyo; Demian Saffer, Pennsylvania State University;  

1340h **T53C-01** Calibrating the turbidite paleoseismometer on the Hikurangi margin, New Zealand, using the 2016 Mw 7.8 Kaikoura earthquake: J Howarth, A R Orpin, S Nodder, D McCleery, L J Strachan, J J Mountjoy, P M Barnes, C Francois-Holde, H C Bostock  
1355h **T53C-02** Static and Time-Dependent Inversions of Slow Slip at the Hikurangi Subduction Zone, New Zealand, Using Numerical Green’s Functions: C A Williams Jr, L M Wallace, N M Bartlow, R M Yohler  
1410h **T53C-03** Episodic Stress Tensor and Fluid Pressure Cycling in Subducting Oceanic Crust During Northern Hikurangi Slow Slip Events: E Warren-Smith, B Fry, E Chon, S A Henrys, A F Sheehan, K Mochizuki, S Y Schwartz  
1425h **T53C-04** Seamount Subduction Prolongs Shallow Slow Slip Event in the Forearc of the Northern Hikurangi Subduction Zone, New Zealand: H R Shaddox, S Y Schwartz, E Todd  
1440h **T53C-05** Extremely long duration of ground motion arising from sedimentary structures above slow slip areas of the Hikurangi subduction zone: Y Kaneko, Y Ito, B Chow, L Wallace, C Tape, E D’Anastasio, R Rapenthen, R Hino  
1455h **T53C-06** Crustal structure of the northern Hikurangi margin and Bay of Plenty from marine seismic reflection imaging and double-sided onshore-offshore seismic tomography: A Gase, H J Van Avendonk, N L Bangs, D A Okaya, S A Henrys, D H N Barker, K Jacobs, S Kodaira, G Fuji, A F Arnulf  
1510h **T53C-07** The relationship between forearc structure and geodetic locking along the Hikurangi margin from SHIRE seismic data: D Bassett, S A Henrys, D H N Barker, A F Arnulf, R Arai, S Kodaira, H J Van Avendonk, N L Bangs, G Fuji, Y Yamamoto, K Obana, J J T Hillman
1525h **T53C-08** Large Underplated Structures along the Southern Hikurangi Margin: Preliminary Results from the SHIRE Seismic Imaging Experiment: **N L Bangs**, H J Van Avendonk, A F Arnulf, A Gase, S A Henrys, D A Okaya, D H N Barker, K Jacobs, G Fujie, R Arai, S Kodaira

EP54A  **(CC) 147A**

**Friday 1600h**

**Interactions Between Neotectonics and Surface Processes Along Active Plate Boundaries III**  *(joint with T)*

**Presiding:** Liang Xue, Oklahoma State University Main Campus; **Yann Gavillot**, Oregon State University; **Janet Watt**, USGS Pacific Coastal and Marine Science Center; **Jenna Hill**, Coastal Carolina University;

1600h **EP54A-01** Accelerated deformation rates in the Cascadia backarc and links to Pliocene slab tear: **L Staisch**, R J Blakely, H M Kelsey, B L Sherrod

1615h **EP54A-02** Subaqueous Tectonic Geomorphology Along the Queen Charlotte Fault: Evidence for Plate Boundary Localization Based on Slip-Rate Estimates For The Last 17,000 years: **D S Brothers**, N C Miller, J V J Barrie, P J Haussler, H G Greene, O Zielke, B D Andrews, P Dartnell


1645h **EP54A-04** Quantifying active deformation within the Southwestern Foothills of Taiwan, from incised fluvial terraces and sedimentary data.: **M Simoes**, V Lefils, J B H Shyu, P Steer, M Rizza, L L Siame


1715h **EP54A-06** 3D Geometry and Slips of Offshore Active Fault based on Seismic Trenching — A Case Study on the Hinagu-Fault-Zone, Kyushu, Japan: **T Ogami**, S Abe, K Mukaiyama, S Suda


1745h **EP54A-08** Resolving rupture characteristics of past earthquakes: **O Zielke**

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**Friday 1600h**

**Mountain Building in Collisional and Cordilleran Orogenic Systems II**  *(joint with EP, G, S, V)*

**Presiding:** Chelsea Mackaman-Lofland, University of Texas at Austin; **Jean-Baptiste Ammirati**, University of Chile; **Magali Riesner**, Institut de Physique du Globe de Paris; **Robert Porritt**, University of Texas at Austin;

1600h **T54A-01** Spatio-temporal evolution of exhumation and topography of the Pyrenees Mountains: **M E Curry**, P van der Beek, R S Huismans, S Wolf, J A Muñoz

1615h **T54A-02** Mountain building at collisional plate boundaries: lessons from 80 Myrs of alpine-type orogeny on the Iberia plate: **F Moutheureau**, J Rat, M Daudet, S Brichau, P Angrand

1630h **T54A-03** The effects of increased sedimentation on orogenic wedges – dynamic model results in comparison with critical taper theory: **P Van Der Beek**, Z Erdös, R S Huismans

1645h **T54A-04** Constraints on the geologic processes and record of collision from an orogen currently transitioning from subduction to collision: the Greater Caucasus: **A R Tye**, N A Niemi, R Safarov, F A Kadirov, G Babayev

1715h **T54A-06** Granite Geochemistry Constrains Major Crustal Thickening and Uplift in Southern Tibet to between 45 and 30Ma: **D J DePaolo**, T M Harrison, Z Zhao, D C Zhu, M M Wielicki, X Mo

1745h **T54A-08** Moho Depth and Crustal Velocity Structure beneath Taiwan from the H-V Stacking of P and S Receiver Functions: **A Goyal**, S H Hung

T54B  **(MM) Liberty L**

**Friday 1600h**

**Structure and Dynamics of the Upper Mantle: Characterizing the Lithosphere–Asthenosphere System from Crust to Transition Zone III**  *(joint with DI, MR, S, V)*

**Presiding:** Claire Currie, University of Alberta; **Vedran Lekic**, University of Maryland; **Jolante van Wijk**, New Mexico Institute of Mining and Technology; **Andrew Schaeffer**, University of Ottawa;

1600h **T54B-01** Probing mantle deformation in Central and Eastern Europe using SKS splitting: **L Petrescu**, G W Stuart, G A Houseman, I D Bastow, M F Ivan, C Smith
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<td>Imaging the Sharpness of the Lithosphere-Asthenosphere Boundary (LAB): S Sun, Y Zhou</td>
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**T54C (MM) Liberty N-P**

**Friday 1600h**

**Subduction Zone Processes at the Hikurangi Margin, New Zealand II** *(joint with G, NH, S)*

**Presiding:** Laura Wallace, GNS Science; Rebecca Bell, Imperial College London; Kimihiro Mochizuki, University of Tokyo; Demian Saffer, Pennsylvania State University;

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<td>Drilling and Coring the Northern Hikurangi Subduction Margin to Unlock the Secrets of Slow Slip: International Ocean Discovery Program Expeditions 372 and 375: P Barnes, D M Saffer, L M Wallace, I A Pecher, K E Petronotis, L LeVay</td>
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<td>Elastic moduli and physical properties of fault rock and protolith associated with SSEs at the Northern Hikurangi margin, NZ: D M Saffer, R E Bell, P Barnes, L M Wallace, H Kitajima, G F Moore, S Han, I A Pecher, K E Petronotis, L LeVay</td>
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