Monday, December 10

DI13B-0029   A Comparative Study of Slab-edge Driven Mantle Flow in the Alaska subduction Zone, the Cocos-Nazca Gap, and the Vanuatu-North Fiji system. **Margarete Ann Jadamec**, **Karen M. Fischer**, **Patricia MJ Durance**, and **Kirstie LaFon Haynie**.

DI13B-0034   Small Scale Flow Induced Azimuthal Seismic Anisotropy beneath Madagascar: Implications for Rheology. **Tahiry Andriantsoa Rajaonarison**, **D. Sarah Stamp**, **Stewart Fishwick**. **Sascha Brune**. and **Anne Glerum**.

G13B-0516   Cryospherically Induced Stress Fluctuations in Tectonically Active Southern Alaska. **Jeanne M Sauber**,, **Natalia A Ruppert**, and **Christopher Rollins**.

S13C-0436   Analogue and Numerical Modelling of Elastic Strain Effect on Coda Wave Interferometry. **Jérôme Azzola**, **Jean Schmittbuhl**, **Dimitri Zigone**, **Olivier Lengliné**,, **Vincent Magnenet**, and **Frederic Masson**.

T13A-08   Geodynamic Modeling of Mantle Evolution of the South China Sea and Surrounding Subduction Systems. **Zhiyuan Zhou** and **Jian Lin**.

T13F-0295   Quantitative analysis of distributed normal faulting patterns in 3D thermal-mechanical simulations of continental rifting. **John Naliboff**, **Sascha Brune**, and **Tim Hake**.

T13I-0353   Multicycle Simulations of Fault Parameters of Mw6-7 Inland Faults. **Anatoly Petukhin**, **Percy Galvez**, **Paul Somerville**, and **Andreas Skarlatoudis**.

Tuesday, December 11

DI21B-001   Investigation of dynamic sub-grid scale (SGS) terms in dynamo simulations with small Ekman number. **Hiroaki Matsui** and **Bruce A Buffett**.

DI22A-05   Dynamics of Stagnant Slabs in the Mantle Transition Zone. **Ying Zhou** and **Zhen Guo**.

DI23A-01   Sensitivity kernels for geodynamic surface observables based on adjoint methods. **Jacqueline Austermann**, **David Al-Attar**, **Wolfgang Bangerth**, and **Mark Hoggard**.

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

DI23A-04   Nonlinear Constitutive Laws for Fault Dynamics. **Matthew Knepley**, **Brad Aagaard**, and **Charles A Williams**.

DI23A-05   Pythonic Parallel Implementation of 3D Lattice Boltzmann Method for Geophysical and Geological Applications.**Gabriele Morra**, **Peter R Mora**, and **David A Yuen**.

DI24B-01   Adaptive Multigrid Solvers for Stokes flow in ASPECT. **Timo Heister** and **Thomas Clevenger**.

DI24B-02   Mantle Convection Beyond the Reference Profile: Accurately Modeling Dynamic Effects of Compressibility. **Rene Gassmoeller**, **Juliane Dannberg**, **Timo Heister**, **Wolfgang Bangerth**, and **Robert Myhill**,

DI24B-03   The Impact of Geodynamically Constrained Lateral Viscosity Variations on Convection-Related Surface Observables. **Marie Kajan**, **Alessandro M Forte**, and **Petar Glisovic**.

DI24B-07   Assessing spectral-element seismic wave propagation on current HPC architectures. **Daniel B Peter**, **Vadim Monteiller**, **Dimitri Komatitsch**, **Malte Schirwon**, **Matthieu Philippe Lefebvre**, **Etienne Bachmann**, **Youyi Ruan**, **Jeroen Tromp**, **Ebru Bozdag**, **Yangkang Chen**, and **Jonathan Vincent**.

DI24B-14   Spectral-Infinite-Element Simulation of Potential Field. Problems in Geophysics. **Hom Nath Gharti**, **Leah Langer**, **Jeroen Tromp**, **Frederik Simons**, and **Stefano Zampini**.

ED21B-13   Why Are the Pieces of Land in the Wide Water that Breath out Fire and Smoke Made of Different Types of Rocks? **Juliane Dannberg** and **Rene Gassmoeller**.

NG24A-08   Convection Simulations Explain the Compositional Heterogeneity of Oceanic Island Chains. **Juliane Dannberg** and **Rene Gassmoeller**.

P24A-07   What Can Surface Observations Tell Us About Ceres' Interior? **Scott D King**, **Michael T Bland**, **Julie C Castillo**, **Anton Ermakov**, **Roger R Fu**, **Simone Marchi**, **Carol A Raymond**, **Jennifer E. C. Scully**, **Hanna G Sizemore**, and **Christopher T Russell**.

S21C-0464   Reconstruction of Fault Geometry Through Hypocenter Clustering for Coulomb Stress Analysis During the L'Aquila Earthquake Swarm. **Brennan Brunsvik**, **Gabriele Morra**, **Gabriele Cambiotti**, **Lauro Chiaraluce**, **Raffaele Di Stefano**, **Maddalena Michele**, and **David A Yuen**.

S21D-0474   Effect of damage and spallation on Rg waves for SPE-5. **Zhou Lei**, **Esteban Rougier**, **Howard J Patton**, **Carene S Larmat**, and **Christopher R Bradley**.

S21D-0479   Triggering mechanisms of aftershocks from explosions and earthquakes using physics-based simulations. **Kayla Krol**, **Arben Pitarka**, **Sean Ricardo Ford**, **William R Walter**, and **Keith B Richards-Dinger**.

V23K-0196   Machine Learning on Infrared Images of Strombolian Eruptions atop Mount Erebus, Antarctica. **Brian Dye** and **Gabriele Morra**.

Wednesday, December 12

DI31C-0026   Mapping transition zone topography beneath China by migration of ScS reverberations. **Samuel McRae Haugland**, **Jeroen Ritsema**, **Jeannot Trampert**, and **Daoyuan Sun**.

DI33C-0051   Venusian Impacts: Starting a Mobile Lid. **Grant Euen** and **Scott D King**.

S31C-0520   Variation in Interplate Coupling Between Downgoing and Overriding Plates: Implications for Great Earthquakes in Areas of Flat Slab Subduction from 3-D Geodynamic Models of Alaska. **Angela Olsen** and **Margarete Ann Jadamec**.

S31D-0538   Born and Rytov Approximations for Forward Modelling of Seismic Waveforms that Sample the Lower Mantle. **Harriet Godwin**, **Tarje Nissen-Meyer**, and **Karin Sigloch**.

S31E-0559   Transdimensional receiver function waveform inversion. **Scott Burdick**, **Makayla Myers**, and **Sarah J Brownlee**.

S31E-1650   Square-root variable-metric (SRVM) based null-space shuttle: a characterization of the non-uniqueness in elastic full-waveform inversion (FWI). **Qiancheng Liu** and **Daniel B Peter**.

T33C-0416   Stability of cratons since early Phanerozoic. **Jyotirmoy Paul** and **Attreyee Ghosh**.

T33C-0417   Evolution of lithospheric drip and its impact on the seismicity in the Central and Southeastern US. **Arushi Saxena**, **Eunseo Choi**, and **Christine Ann Powell**.

T33C-0418	The numerical simulation for lithospheric mantle delamination triggered by oceanic plate subduction. **Miao Chen**, **Xiaobing Shen**, and **Wei Leng**.
T33D-0443	Fault Slip Rates and Off-fault Deformation Rates in Southern California Examined with Elasto-Plastic Deformation Models. **Yi-Rong Yang** and **Prof. Kaj M Johnson**.
V31H-0222	Quantifying state-of-stress and surface deformation in magmatic rift zones:Eastern Rift, Africa. **Sarah Jaye C Oliva**, **Cynthia Ebinger**, **Eleonora Rivalta**, **Christelle Wauthier**, and **Charles A Williams**.

Thursday, December 13

DI41B-0006	Effect of viscosity structure on long wavelength convection and comparison with tomographic models. **Diogo José Louro Lourenço**, **Maxwell L Rudolph**, and **Pritwiraj Moulik**.
DI43C-0030	Geodynamics of Martian Volcanism and Mantle Melting: Formation of the Tharsis Rise Due to Small-Scale Convection at the Dichotomy Boundary. **Josh Murphy**.
IN43C-0909	A Decade+ of Open Software Practice at CIG. **Lorraine Hwang** and **Louise H Kellogg**.
P43D-3805	Simulating Atmospheric Features of Jupiter and Saturn With Deep Convection Models. **Moritz H Heimpel**, **Nicholas Andrew Featherstone**, and **Jonathan M Aurnou**.
S43C-0611	Joint theory of friction and fracturing for earthquake rupture modelling. **Ekaterina Bolotskaya** and **Bradford H Hager**.
T43G-0506	Towards Earthquake System Science: Constraining Basal Mantle Stress Partitioning Within the Lithosphere and Crust. **Ravi V S Kanda** and **Anthony R Lowry**.
T41H-0393	Assessing the Generation of the 1964 Great Alaska Earthquake in Terms of the Dynamics of a Fore-arc Sliver System. **Kirstie LaFon Haynie** and **Margarete Ann Jadamec**.
T43H-0518	Modeling Lithospheric Stress of Continental United States. **Zebin Cao**, **Lijun Liu**, and **Quan Zhou**.

Friday, December 14

DI51B-0003	Role of Strain-Dependent Weakening Memory on the Style of Mantle Convection and Plate Boundary Stability. **Lukas Fuchs**, **Zel Hurewitz**, and **Thorsten W Becker**.
DI51B-0005	The Role of Dynamic Topography on Glacial Inception in North America. **Sophie Coulson**, **Jacqueline Austermann**, **Mark Hoggard**, and **Jerry X Mitrovica**.
DI51B-0017	Explore the Density Structure of Cratonic Lithosphere Using Global Residual Topography. **Yaoyi Wang**, **Lijun Liu**, and **Jiashun Hu**.
DI51B-0020	The Relation Between Tractions and Strain Rate at the Base of the Lithosphere: Key to Understanding Cratonic Stability. **Attreyee Ghosh**, **Jyotirmoy Paul**, and **Clinton P Conrad**.
S51A-05	The Advantages of Sp Pre-stack Migration Based on Scattering Kernels. **Junlin Hua**, **Karen M. Fischer**, and **Nicholas J Mancinelli**.
S53C-0409	Full Waveform Tomography: A Comparison Between Adjoint-Wavefield and Scattering-Integral Approaches. **Changyang Yin**, **Li Zhao**, and **Jieyuan Ning**.
S53C-0413	Impact of surface topography on full-waveform tomography for Central Mexico. **Armando Espindola-Carmona** and **Daniel B Peter**.
S53C-0417	Adjoint Tomography of South America based on 3D Spectral-Element Seismic Wave Simulations. **Caio Ciardelli**, **Ebru Bozdag**, and **Marcelo Assumpcao**.
S53E-0458	Moment tensor estimation and uncertainty quantification using mtuq, instaseis, obspy and pymc. **Ryan Modrak**, **Vipul Silwal**, **Celso R Alvizuri**, and **Carl Tape**.
S53E-0460	Hybrid waveform modeling for small-scale source complexity at teleseismic distances. **Marta Pienkowska-Cote**, **Stuart E.J. Nippress**, **David Bowers**, and **Tarje Nissen-Meyer**.
T51G-0255	Numerical simulations of stress variations with depth in a model for the San Jacinto fault zone. **Niloufar Abolfathian**, **Christopher W Johnson**, and **Yehuda Ben-Zion**.
T51I-0279	Understanding subduction dynamics in the Southwest Pacific. **Diandian Peng**, **Lijun Liu**, and **Jiashun Hu**.
T51I-0282	Adjoint Tomography of the Hikurangi Subduction Zone and New Zealand's North Island. **Bryant Chow**, **Yoshihiro Kaneko**, **Vipul Silwal**, **Carl Tape**, and **John Townend**.
T52D-05	Transition Zone Structure Beneath the Eastern US. **Shangxin Liu**, **John C. Aragon**, **Maggie Benoit**, **Maureen D Long**, and **Scott D King**.
T53C-02	Static and Time-Dependent Inversions of Slow Slip at the Hikurangi Subduction Zone, New Zealand, Using Numerical Green's Functions. **Charles A Williams**, **Laura M Wallace**, **Noel M Bartlow**, and **Ryan Michael Yohler**.
T54B-08	Imaging the Sharpness of the Lithosphere-Asthenosphere Boundary (LAB). **Shuyang Sun** and **Ying Zhou**.
V53A-01	Modeling Melt Generation and Transport by Integrating Thermodynamic Models in Geodynamic Simulations Using the Community Code ASPECT. **Juliane Dannberg**, **Rene Gassmoeller**, and **Timo Heister**.