



AGU 2017

EARTHSCOPE-RELATED
PRESENTATIONS

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THURSDAY, 14 DECEMBER 2017

POSTERS

08:00 - 12:20 | Poster Hall D-F

[S41C-0790 Exploring Low-Amplitude, Long-Duration Deformational Transients on the Cascadia Subduction Zone](#)

Carolyn Nuyen and David A Schmidt, University of Washington

[MR41A-0394 Experimental and Theoretical Equation of State of GeO₂ to 1.2 Mbars](#)

Rajkrishna Dutta, Claire White, Princeton University; Eran Greenberg, Vitali B Prakapenka, University of Chicago; and Thomas S Duffy, Princeton University

13:40 - 18:00 | Poster Hall D-F

[DI43B-0365 Shear Wave Splitting and Mantle Flow in Alaska \(Invited\)](#)

Amanda McPherson, Douglas H Christensen, University of Alaska Fairbanks; Geoffrey A Abers, Cornell University; Carl Tape, University of Alaska Fairbanks; and Melissa M Moore-Driskell, University of North Alabama

[G43A-0900 New constraints on slip rates and locking depths of the San Andreas Fault System from Sentinel-1A InSAR and GAGE GPS observations](#)

Bridget R Smith-Konter, Lauren Ann Ward, Justin Takeshi Higa, University of Hawaii at Manoa; Xiaohua Xu, Scripps Institution of Oceanography; Xiaopeng Tong, Land Information New Zealand; and David T Sandwell, Scripps Institution of Oceanography

[G43B-0946 Decadal GPS Time Series and Velocity Fields Spanning the North American Continent and Beyond: New Data Products, Cyberinfrastructure and Case Studies from the EarthScope Plate Boundary Observatory \(PBO\) and Other Regional Networks](#)

David A Phillips, UNAVCO; Thomas Herring, MIT; Timothy Ian Melbourne, Central Washington University; Mark H Murray, New Mexico Institute of Mining and Technology; Walter Michael Szeliga, Central Washington University; Michael Floyd, MIT; Christine Maria

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Puskas, UNAVCO; Robert W King, MIT; Frances M Boler, Charles M Meertens and Glen S Mattioli, UNAVCO

[S43A-0830 Clustering P-Wave Receiver Functions To Constrain Subsurface Seismic Structure](#)

Chengping Chai, University of Tennessee; Carene S Larmat, Los Alamos National Laboratory; Monica Maceira, University of Tennessee, Oak Ridge National Laboratory; Charles J Ammon, Pennsylvania State University Main Campus; Rizheng He, Chinese Academy of Geological Sciences; and Haijiang Zhang, University of Science and Technology of China

[DI43B-0359 Seismic Anisotropy beneath Alaska Constrained by Shear Wave Splitting Analysis](#)

Juan Pablo Acevedo, Texas A&M University College Station; Kelly Hong Liu, Fansheng Kong, Haider Hassan Dahm, Jilai Zhang and Stephen S Gao, Missouri University of Science and Technology

PRESENTATIONS

Thursday, 08:00 - 08:15 | Location: 220-221

[S41E-01 Imaging the Alaskan subduction zone with joint inversion of ambient noise and teleseismic surface waves](#)

Robert Martin-Short, University of California Berkeley; Richard M Allen, UC Berkeley Seismology Lab; and Robert Porritt, University of Arizona

Thursday, 08:15 - 08:30 | Location: 220-221

[S41E-02 Alaskan crustal thickness variations from P receiver functions provide insight into both inherited and active plate boundary structures \(Invited\)](#)

Meghan Samantha Miller, Australian National University; Leland O'Driscoll, University of Oregon; Robert Porritt, University of Texas at Austin; and Sarah Roeske, University of California Davis

Thursday, 08:30 - 08:45 | Location: 220-221

[S41E-03 What CCArray Can Learn from Other Stations Operated in Western Canada and Alaska](#)

Andrew Frassetto, Kasey Aderhold, Robert W Busby and Robert Woodward, Incorporated Research Institutions for Seismology

Thursday, 08:45 - 09:00 | Location: 220-221

[S41E-04 Contributions of USArray to Earthquake Monitoring in Alaska](#)

Natalia A Ruppert, University of Alaska Fairbanks

Thursday, 09:00 - 09:15 | Location: 220-221

[S41E-05 Seismic evidence for mantle suture and a collisional origin for the Canadian Cordillera](#)

Yunfeng Chen, Yu Jeffrey Gu, Claire A Currie, Stephen T Johnston, University of Alberta; Shu-Huei Hung, National Taiwan University; Andrew J Schaeffer and Pascal Audet, University of Ottawa

Thursday, 09:00 - 09:15 | Location: 203-205

[DI41B-05 Estimates of the seismic properties of subducted eclogite in the lower mantle from observations of S-to-P wave conversions](#)

Samuel McRae Haugland, Jeroen Ritsema, University of Michigan, Ann Arbor; Satoshi Kaneshima, Kyushu University; and Michael Scott Thorne, University of Utah

Thursday, 09:15 - 09:30 | Location: 220-221

[S41E-06 EarthScope's Transportable Array: Status of the Alaska Deployment and Guide to Resources for Lower48 Deployment](#)

Robert W Busby, Robert Woodward, Kasey Aderhold, and Andrew Frassetto, IRIS Consortium

Thursday, 09:30 - 09:45 | Location: 220-221

[S41E-07 Multi-Mode 3D Kirchhoff Migration of Receiver Functions at Continental Scale With Applications to USArray](#)

Florian Millet, LGLTPE Laboratoire de Géologie de Lyon: Terre, Planètes et Environnement; Thomas Bodin, LGLTPE and CNRS; and Stephane Rondenay, University of Bergen

Thursday, 09:30 - 09:45 | Location: 215-216

[T41E-07 A Surface Wave's View of the Mid-Continent Rift](#)

Anna E Foster, GEOTOP-UQAM; Fiona Ann Darbyshire, University of Quebec at Montreal UQAM; and Andrew J Schaeffer, University of Ottawa

Thursday, 09:30 - 09:45 | Location: 222

[G41A-07 Joint Inversion of Borehole Strainmeter and GPS Time Series for Slip and Stress Distribution during Cascadian ETS](#)

Nicholas Benz and Noel M Bartlow, University of Missouri

Thursday, 09:45 - 10:00 | Location: 220-221

[S41E-08 Lithospheric Structure across the Alaskan Cordillera from Surface Waves and Receiver Functions](#)

Fan-Chi Lin and Kevin Michael Ward, University of Utah

Thursday, 10:20 - 10:35 | Location: 220-221

[S42A-01 Macro-scale Tectonics of the Eastern North American Shield: Insights from a new Absolute P-wave Tomographic Model for North America.](#)

Alistair Boyce, Ian D Bastow, Imperial College London; Eva Marie Golos, Massachusetts Institute of Technology; Scott Burdick, Wayne State University; Robert D van der Hilst, Massachusetts Institute of Technology; Stephane Rondenay, University of Bergen

Thursday, 10:35 - 10:50 | Location: 220-221

[S42A-02 Multi-scale mantle structure underneath the Americas from a new tomographic model of seismic shear velocity](#)

Robert W Porritt, Thorsten W Becker, University of Texas at Austin; Ludwig Auer, ETH Swiss Federal Institute of Technology Zurich; Lapo Boschi, Institut des Sciences de la Terre Paris (iSTeP)

Thursday, 10:50 - 11:05 | Location: 220-221

[S42A-03 The Influence of Geography and Geology on Seismic Background Noise Levels Across the United States as Revealed by the Transportable Array](#)

Robert E Anthony, Adam T Ringler, Austin A Holland, and David C Wilson, USGS Geologic Hazards Science Center

Thursday, 11:05 - 11:20 | Location: 220-221

[S42A-04 Surprises from the Magnetotelluric Component of the USArray in the Eastern United States: Perplexing Anticorrelations with Seismic Images and Puzzling Insights into Continental Dynamics \(Invited\)](#)

Benjamin S Murphy and Gary D Egbert, Oregon State University

Thursday, 11:20 - 11:35 | Location: 220-221

[S42A-05 Imaging Strong Lateral Heterogeneities with USArray using Body-to-Surface Wave Scattering](#)

Chunquan Yu, California Institute of Technology, Seismological Lab; Zhongwen Zhan, CalTech Seismological Laboratory; Egill Hauksson, Caltech Seismo Lab; and Elizabeth S Cochran, Earthquake Science Center

Thursday, 11:20 - 11:35 | Location: 210

[T42C-05 Three-Dimensional Magnetotelluric Imaging of the Cascadia Subduction Zone with an Amphibious Array](#)

Gary D Egbert, Oregon State University; Bo Yang, China University of Geosciences Wuhan; Paul Bedrosian, USGS; Anna Kelbert, Geologic Hazards Science Center Denver; Kerry Key, Institute of Geophysics and Planetary Physics La Jolla; Dean Livelybrooks, University of Oregon; Blake Anthony Parris, University of Oregon; and Adam Schultz, Oregon State University

Thursday, 11:35 - 11:50 | Location: 220-221

[S42A-06 Upside-Down Subduction of the Farallon Slab and the Origin of Yellowstone Volcanism from Finite-Frequency Tomography of USArray Receiver Functions](#)

Ying Zhou, Virginia Tech

Thursday, 11:50 - 11:55 | Location: 255-257

[PA42A-19 How Collecting and Freely Sharing Geophysical Data Broadly Benefits Society](#)

Andrew Frassetto, Robert Woodward and Robert S Detrick, Incorporated Research Institutions for Seismology

Thursday, 12:05 - 12:20 | Location: 220-221

[S42A-08 Mapping the upper mantle beneath North American continent with joint inversion of surface-wave phase and amplitude](#)

*Kazunori Yoshizawa, Hokkaido University; Kouta Hamada, Hokkaido University, Japan
Meteorological Agency*

Thursday, 13:55 - 14:10 | Location: 210

[T43F-02 Augmenting Onshore GPS Displacements with Offshore Observations to Improve Slip Characterization for Cascadia Subduction Earthquakes](#)

Jessie K Saunders and Jennifer Susan Haase, Scripps Institution of Oceanography

Thursday, 14:10 - 14:25 | Location: 222

[S43G-03 Azimuthally Anisotropic Global Adjoint Tomography](#)

*Ebru Bozdog, Colorado School of Mines; Ridvan Orsvuran, University of Côte d'Azur;
Matthieu Philippe Lefebvre, Wenjie Lei, Princeton University; Daniel B Peter, ETH Swiss
Federal Institute of Technology Zurich; Youyi Ruan, James A Smith, Princeton University;
Dimitri Komatitsch, CNRS, Laboratory of Mechanics and Acoustics; and Jeroen Tromp,
Princeton University*

Thursday, 14:40 - 14:55 | Location: 242

[ED43A-05 UNAVCO's Education and Community Engagement Program: Evaluating Five years of Geoscience Education and Community Outreach](#)

Donna J Charlevoix, UNAVCO and Erik Dutilly, Boulder, CO

Thursday, 16:00 - 16:15 | Location: 203-205

[DI44A-01 Heterogeneous distribution of water in the mantle transition zone beneath United States inferred from seismic observations](#)

*Yinzhi Wang, Gary L Pavlis, Indiana University Bloomington; and Mingming Li, Arizona
State University*

Thursday, 17:30 - 17:45 | Location: 203-205

[DI44A-07 Global Adjoint Tomography -- Hotspots and Slabs](#)

*Youyi Ruan, Wenjie Lei, Matthieu Philippe Lefebvre, Ryan T Modrak, James A Smith,
Princeton University; Ridvan Orsvuran, University of Nice Sophia Antipolis; Ebru Bozdog,
Colorado School of Mines; and Jeroen Tromp, Princeton University*