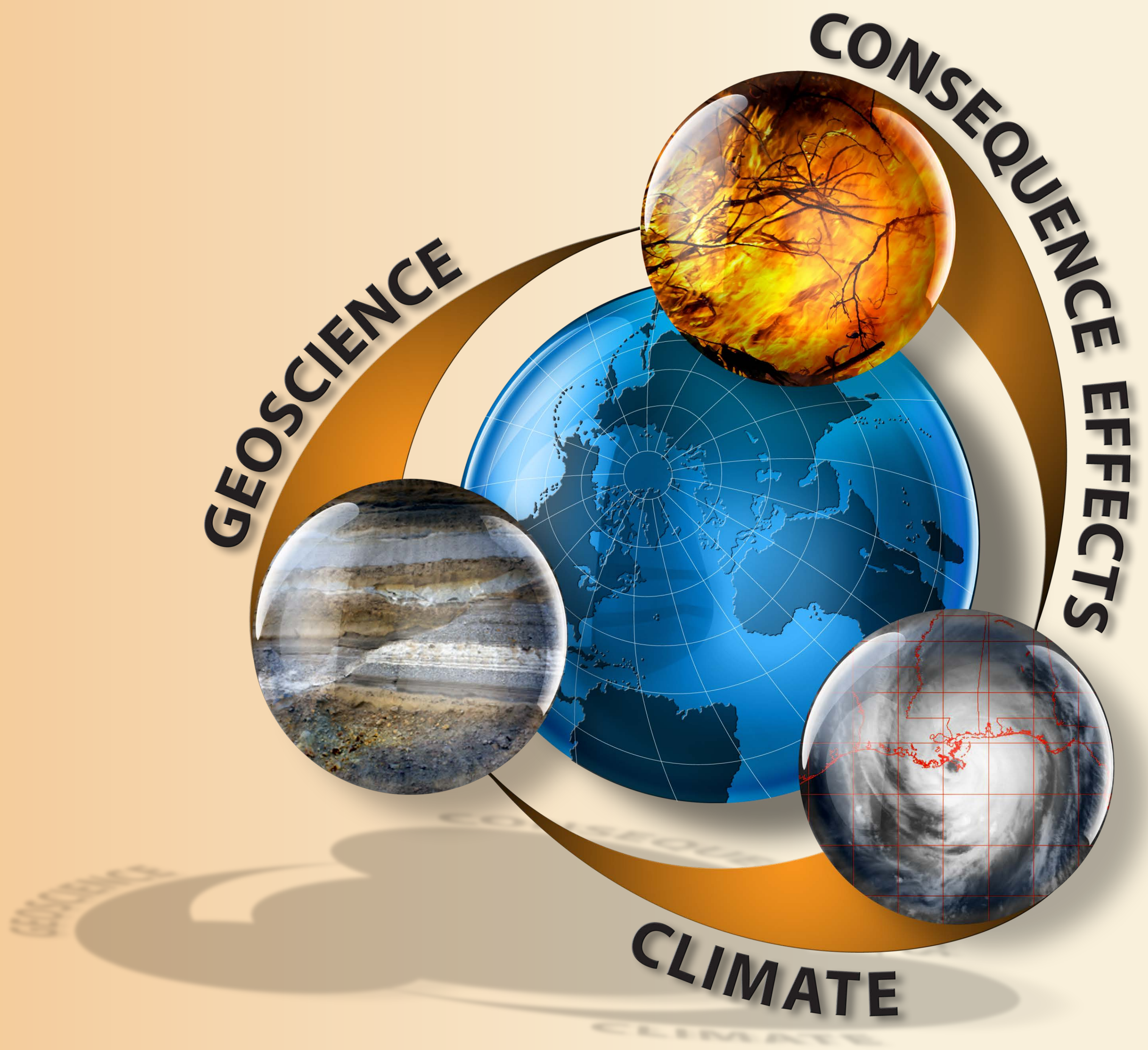




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Abstract
[H13M-01 Site Characterization for a Deep Borehole Field Test](#)
Monday, 14 December 2015 13:40 - 13:55 *Moscone West - 3018*

Authors
[Kristopher Kuhlman](#) *Sandia National Laboratories*
[Ernest Hardin](#) *Sandia National Laboratories*
[Geoff Freeze](#) *Sandia National Laboratories*
[David Sassani](#) *Sandia National Laboratories*
[Patrick Brady](#) *Sandia National Laboratories*

Abstract
[H11B-1329 Numerical Modeling of Deep Borehole Disposal Performance: Influence of Regional Hydrology](#)
Monday, 14 December 2015 08:00 - 12:20 *Moscone South - Poster Hall*

Authors
[Emily Stein](#) *Sandia National Laboratories*
[Glenn Hammond](#) *Sandia National Laboratories*
[Geoff Freeze](#) *Sandia National Laboratories*
[Teklu Hadgu](#) *Sandia National Laboratories*

Abstract
[H13M-08 Geomechanical Modeling of CO₂ Injection Site to Predict Wellbore Stresses and Strains for the Design of Wellbore Seal Repair Materials](#)
Monday, 14 December 2015 15:25 - 15:40 *Moscone West - 3018*

Authors
[Steven Sobolik](#) *Sandia National Laboratories*
[Steven Gomez](#) *Sandia National Laboratories*
[Edward Matteo](#) *Sandia National Laboratories*
[John Stormont](#) *University of New Mexico Main Campus*

Abstract
[H11B-1323 Geomechanical Considerations for the Deep Borehole Field Test](#)
Monday, 14 December 2015 08:00 - 12:20 *Moscone South - Poster Hall*

Author
[Byoung-Yoon Park](#) *Sandia National Laboratories*

Abstract
[H12A-02 PFLOTTRAN Simulation of Waste Isolation Pilot Plant Single Waste Panel](#)
Monday, 14 December 2015 10:35 - 10:50 *Moscone West - 3018*

Authors
[Heeho Park](#) *Sandia National Laboratories*
[Glenn Hammond](#) *Sandia National Laboratories*

Abstract
[H13E-1587 Efficient high-dimensional characterization of conductivity in a sand box using massive MRI-imaged concentration data](#)
Monday, 14 December 2015 13:40 - 18:00 *Moscone South - Poster Hall*

Authors
[Jonghyun Lee](#) *Stanford University*
[Hongkyu Yoon](#) *Sandia National Lab*
[Peter Kitanidis](#) *Stanford University*
[Charles Werth](#) *University of Texas at Austin*
[Albert Valocchi](#) *Univ Illinois*

Abstract
[H11B-1325 Site Guidelines for a Deep Borehole Field Test](#)
Monday, 14 December 2015 08:00 - 12:20 *Moscone South - Poster Hall*

Authors
[David Sassani](#) *Sandia National Laboratories*
[Kristopher Kuhlman](#) *Sandia National Laboratories*
[Geoff Freeze](#) *Sandia National Laboratories*
[Robert MacKinnon](#) *Sandia National Laboratories*
[Frank Perry](#) *Los Alamos National Laboratory*

Abstract
[H11B-1338 Geomechanical Engineering Concepts Applied to Deep Borehole Disposal Wells](#)
Monday, 14 December 2015 08:00 - 12:20 *Moscone South - Poster Hall*

Authors
[Courtney Herrick](#) *Sandia National Laboratories*
[Bezalel Haimson](#) *Univ of Wisc-Madison*
[Moo Lee](#) *Sandia National Lab*

Monday, December 14

Session

[H11B Deep Boreholes and Wellbores: Monitoring, Modeling, and Mitigation I Posters](#)

Monday, 14 December 2015 08:00 - 12:20 Moscone South - Poster Hall

Primary Convener

[Mary Kang](#) *Stanford University*

Conveners

[Robert Jackson](#) *Stanford University*
[Jens Birkholzer](#) *Lawrence Berkeley National Laboratory*
[David Sassani](#) *Sandia National Laboratories*

Chairs

[Joao Paulo Nunes](#) *Imperial College London*
[Kristopher Kuhlman](#) *Sandia National Laboratories*
[Mary Kang](#) *Stanford University*

Session

[H13M Deep Boreholes and Wellbores: Monitoring, Modeling, and Mitigation II](#)

Monday, 14 December 2015 13:40 - 15:40 Moscone West - 3018

Primary Convener

[Mary Kang](#) *Stanford University*

Conveners

[Robert Jackson](#) *Stanford University*
[Jens Birkholzer](#) *Lawrence Berkeley National Laboratory*
[David Sassani](#) *Sandia National Laboratories*

Chairs

[James Carey](#) *Los Alamos National Laboratory*
[Robert Jackson](#) *Stanford University*
[Jens Birkholzer](#) *Lawrence Berkeley National Laboratory*
[David Sassani](#) *Sandia National Laboratories*

Abstract

[NG13A-1873 Laboratory Scale Hydraulic Fracture and Proppant Injection](#)

Monday, 14 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors [Mathew Ingraham](#) *Sandia National Laboratories*

[Rekha Rao](#) *Sandia National Laboratories*
[Daniel Bolintineanu](#) *Sandia National Laboratories*
[Jeremy Lechman](#) *Sandia National Laboratories*
[Stephen Bauer](#) *Sandia National Laboratories*
[Enrico Quintana](#) *Sandia National Laboratories*

TH13AARM Next Generation Town Hall

Monday, December 15, 2014 2:30 PM - 01:30 PM ARM Next Generation Town Hall
Moscone West 2002

Primary Conveners

[Gerald Geernaert - Department of Energy Germantown](#)

Co-conveners

[Sally McFarlane - Department of Energy Germantown](#)

Abstract

[NG13A-1873 Laboratory Scale Hydraulic Fracture and Proppant Injection](#)

Monday, 14 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors [Mathew Ingraham](#) *Sandia National Laboratories*

[Rekha Rao](#) *Sandia National Laboratories*
[Daniel Bolintineanu](#) *Sandia National Laboratories*
[Jeremy Lechman](#) *Sandia National Laboratories*
[Stephen Bauer](#) *Sandia National Laboratories*
[Enrico Quintana](#) *Sandia National Laboratories*

Abstract

[H13M-01 Site Characterization for a Deep Borehole Field Test](#)

Monday, 14 December 2015 13:40 - 13:55 Moscone West - 3018

Authors [Kristopher Kuhlman](#) *Sandia National Laboratories*

[Ernest Hardin](#) *Sandia National Laboratories*
[Geoff Freeze](#) *Sandia National Laboratories*
[David Sassani](#) *Sandia National Laboratories*
[Patrick Brady](#) *Sandia National Laboratories*

Abstract

[A14F-02 Comparing observations of fossil fuel-derived CO₂ in California with predictions from bottom-up inventories](#)

Monday, 14 December 2015 16:12 - 16:24 Moscone West - 3012

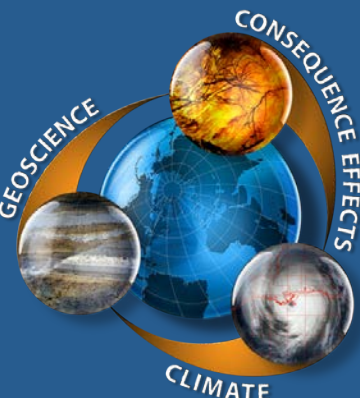
Authors

[Heather Graven](#) *Imperial College London*
[Tim Lueker](#) *Scripps Institution of Oceanography*
[Marc Fischer](#) *Lawrence Berkeley National Laboratory*
[Thomas Guilderson](#) *Lawrence Livermore National Laboratory*
[Ralph Keeling](#) *University of California San Diego*
[Kieran Brophy](#) *Imperial College London*
[Tim Arnold](#) *Met Office Hadley Center for Climate Change*
[Ray Bambha](#) *Sandia National Laboratories*
[William Callahan](#) *Earth Networks Inc.*
[J Elliott Campbell](#) *University of California Merced*
[Christian Frankenberg](#) *NASA Jet Propulsion Laboratory*
[Ying Hsu](#) *CAL/EPA (Air Resources Board)*

[Laura Iraci](#) *NASA Ames Research Center*
[Seongeun Jeong](#) *Lawrence Berkeley National Lab*
[Jooil Kim](#) *University of California San Diego*
[Brian LaFranchi](#) *Sandia National Laboratories*
[Scott Lehman](#) *University of Colorado at Boulder*
[Alistair Manning](#) *UK Meteorological Office*
[Hope Michelsen](#) *Sandia National Laboratories*
[John Miller](#) *NOAA Boulder*
[Sally Newman](#) *California Institute of Technology*
[Nicholas Parazoo](#) *NASA Jet Propulsion Laboratory*
[Christopher Sloop](#) *Earth Networks Inc.*
[Stephen Walker](#) *University of California San Diego*
[Mary Whelan](#) *University of California Merced*
[Debra Wunch](#) *California Institute of Technology*



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Abstract
[T23B-2938 Use of the Fracture Continuum Model for Numerical Modeling of Flow and Transport of Deep Geologic Disposal of Nuclear Waste in Crystalline Rock](#)
Tuesday, 15 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors

[Teklu Hadgu](#) Sandia National Laboratories
[Elena Kalinina](#) Sandia National Laboratory
[Katherine Klise](#) Sandia National Laboratories
[Yifeng Wang](#) Sandia National Laboratories
Sandia National Laboratories

Abstract
[NS21B-1924 Imaging a vertical shaft from a tunnel using muons](#)
Tuesday, 15 December 2015 08:00 - 12:20 Moscone South - Poster Hall

Authors

[Nedra Bonal](#) Sandia National Labs
[Leiph Preston](#) Sandia National Laboratories
[Daniel Dorsey](#) Sandia National Laboratories
[Dave Schwellenbach](#) National Security Technologies - NSTec
[Andrew Green](#) National Security Technologies
[Duane Smalley](#)

Abstract
[MR21B-2619 Microscopic evidence of grain boundary moisture during granular salt reconsolidation](#)
Tuesday, 15 December 2015 08:00 - 12:20 Moscone South - Poster Hall

Authors

[Melissa Mills](#) Sandia National Laboratories
University of New Mexico Main Campus
[Frank Hansen](#) Sandia National Laboratories
[Stephen Bauer](#) Sandia National Laboratories
[John Stormont](#) University of New Mexico Main Campus

Abstract
[V23B-3157 Derivation of Pitzer Interaction Parameters for an Aqueous Species Pair of Sodium and Iron\(II\)-Citrate Complex](#)
Tuesday, 15 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors

[Je-Hun Jang](#) Sandia National Laboratories
[Martin Nemer](#) Sandia National Laboratories

Abstract
[S21B-2693 Path-Dependent Travel Time Prediction Variance and Covariance for a Global Tomographic P- and S-Velocity Model](#)
Tuesday, 15 December 2015 08:00 - 12:20 Moscone South - Poster Hall

Authors

[James Hipp](#) Sandia National Laboratories
[Sanford Ballard](#) Sandia National Laboratories
[Michael Begnaud](#) Los Alamos National Laboratory
[Andre Encarnacao](#) Sandia National Laboratories
[Christopher Young](#) Sandia National Laboratories
[W. Phillips](#) Los Alamos National Laboratory

Session
TH25I: Revolutionizing Utilization of the Earth’s Subsurface for America’s Energy Future: the DOE Subsurface Crosscut Initiative (SubTER)
Tuesday, 15 December 2015 18:15 - 19:15 Moscone West – 2004

Primary Contact

[Susan Hubbard](#) Lawrence Berkeley National Laboratory

Presenters

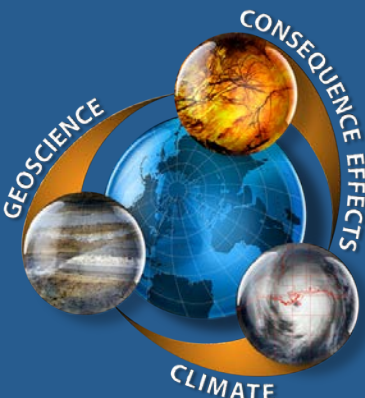
[Marianne Walck](#) Sandia National Laboratories
[Douglas Hollett](#) Department of Energy Washington DC - DOE
[Julio Friedmann](#) Department of Energy Washington DC - DOE

Abstract A21G-0236 Estimating methane and nitrous oxide emissions in California using multi-tower observations and hierarchical Bayesian inversion Tuesday, 15 December 2015 08:00 - 12:20 Moscone South - Poster Hall Authors Seongeun Jeong Lawrence Berkeley National Lab Ying Hsu CAL/EPA (Air Resources Board) Sally Newman California Institute of Technology Jingsong Zhang University of California, Riverside Arlyn Andrews NOAA Earth System Research Lab Laura Bianco NOAA Boulder Justin Bagley Lawrence Berkeley National Lab Xinguang Cui Lawrence Berkeley National Lab	Heather Graven Imperial College London Jooil Kim University of California San Diego Peter Salameh Scripps Institution of Oceanography Brian LaFranchi Sandia National Laboratories Chad Priest University of California, Riverside Mixtli Campos-Pineda University of California, Riverside Elena Novakovskaia George Mason University Fairfax Christopher Sloop Earth Networks Inc. Hope Michelsen Sandia National Laboratories Ray Bambha Sandia National Laboratories Ray Weiss Scripps Institution of Oceanography Ralph Keeling University of California San Diego Marc Fischer Lawrence Berkeley National Laboratory
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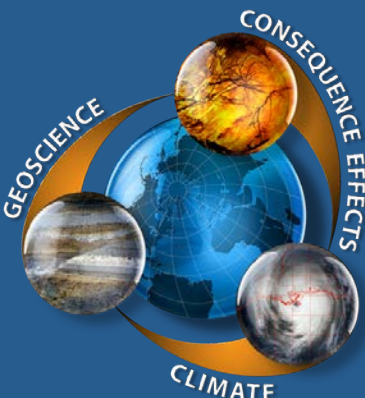
Abstract
[OS23B-1995: Is Submarine Groundwater Discharge a Gas Hydrate Formation Mechanism on the Circum-Arctic Shelf?](#)
Tuesday, 15 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors

[Jennifer Frederick](#) University of California Berkeley
Desert Research Institute
[Bruce Buffett](#) University of California Berkeley



Abstract NS31A-1952 Electromagnetic Measurements in an Active Oilfield Environment Wednesday, 16 December 2015 08:00 - 12:20 Moscone South - Poster Hall	Authors Kimberly Schramm Sandia National Laboratories David Aldridge Sandia National Laboratories Lewis Bartel Sandia National Laboratories Hunter Knox Sandia National Laboratories Chester Weiss Sandia National Laboratories
Abstract NS31A-1953 Measuring Changes in Electrical Conductivity of Fractures from DC Resistivity Data in an Active Oilfield Environment: A Model Study for Surface-Based Data. Wednesday, 16 December 2015 08:00 - 12:20 Moscone South - Poster Hall	Authors Chester Weiss Sandia National Laboratories David Aldridge Sandia National Laboratories Hunter Knox Sandia National Laboratories Kimberly Schramm Sandia National Laboratories Lewis Bartel Sandia National Laboratories
Abstract S34B-06 Monitoring Seasonal Changes in Permafrost Using Seismic Interferometry Wednesday, 16 December 2015 17:15 - 17:30 Moscone South - 307	
Authors Stephanie James Univ of FL-Geological Sciences Sandia National Laboratories Hunter Knox Sandia National Laboratories Robert Abbott Sandia National Laboratories	
Abstract IN31A-1756 Stride Search: A General Algorithm for Storm Detection in High Resolution Climate Data Wednesday, 16 December 2015 08:00 - 12:20 Moscone South - Poster Hall	
Authors Peter Bosler Sandia National Laboratories Erika Roesler Sandia National Laboratories Mark Taylor Sandia National Laboratories Miranda Mundt University of California Los Angeles	
Abstract NH32C-03 Infrasound Monitoring of Natural Hazards Wednesday, 16 December 2015 10:50 - 11:05 Moscone South - 305	
Author Stephen Arrowsmith Sandia National Laboratories	
Abstract NS34A-07 A Scalable Multi-chain Markov Chain Monte Carlo Method for Inverting Subsurface Hydraulic and Geological Properties Wednesday, 16 December 2015 17:35 - 17:50 Moscone West - 3024	Authors Jie Bao Pacific Northwest National Laboratory Huiying Ren Pacific Northwest National Laboratory Zhangshuan Hou Pacific Northwest National Laboratory Jaideep Ray Sandia National Laboratories Laura Swiler Sandia National Laboratories Maoyi Huang Pacific Northwest National Laboratory
Abstract GC34D-01: Planning and the Energy-Water Nexus Wednesday, 16 December 2015 16:00 - 16:15 Moscone West - 3001 Authors Vincent Tidwell Sandia Natl Laboratories Michael Bailey Western Electricity Coordinating Council	Katie Zemlick University of New Mexico Barbara Moreland Sandia Natl Laboratories
Session A33D Black- and Brown-Carbon Light-Absorbing Aerosols: Attribution, Quantification, and Impact I Posters Wednesday, 16 December 2015 13:40 - 18:00 Moscone South - Poster Hall Primary Convener Hope Michelsen Sandia National Laboratories	Conveners Ray Bambha Sandia National Laboratories Joshua Schwarz NOAA ESRL Chairs Joshua Schwarz NOAA Boulder Ray Bambha Sandia National Laboratories Hope Michelsen Sandia National Laboratories
Abstract A33D-0179 Effects of Aggregate Morphology and Size on SP2 Measurements of Black Carbon Wednesday, 16 December 2015 13:40 - 18:00 Moscone South - Poster Hall	
Authors Ray Bambha Sandia National Laboratories Hope Michelsen Sandia National Laboratories	
Abstract A31B-0043 Inverse Estimation of California Methane Emissions and Their Uncertainties using FLEXPART-WRF Wednesday, 16 December 2015 08:00 - 12:20 Moscone South - Poster Hall	Authors John Nowak Aerodyne Research Inc. Daven Henze University of Colorado at Boulder Nicolas Bousserez University of Colorado at Boulder Marc Fischer Lawrence Berkeley National Laboratory Seongeun Jeong Lawrence Berkeley National Lab Zhen Liu Sandia National Laboratories Hope Michelsen Sandia National Laboratories Gregory Santoni Harvard University Bruce Daube Harvard University Eric Kort University of Michigan Ann Arbor Gregory Frost NOAA Boulder Thomas Ryerson NOAA Steven Wofsy Harvard University Michael Trainer NOAA Earth System Research Lab
Abstract AE31A-0423 Improvements to a High Spectral Resolution, Radiation-Hydrodynamics Model of a Lightning Return Stroke and Comparisons with Measured Spectra and Inferred Plasma Properties Wednesday, 16 December 2015 08:00 - 12:20 Moscone South- Poster Hall	
Authors Jarrod Edwards Sandia National Laboratories Philip Dreike Sandia National Laboratories Mark Smith Sandia National Laboratories Michael Clemenson Sandia National Laboratories Joshua Zollweg Sandia National Laboratories	
Abstract AE31A-0422 Multi-mode Observations of Cloud-to-Ground Lightning Strokes Wednesday, 16 December 2015 08:00 - 12:20 Moscone South- Poster Hall	Authors Mark Smith Sandia National Laboratories Braden Smith Sandia National Laboratories Michael Clemenson Sandia National Laboratories Joshua Zollweg Sandia National Laboratories

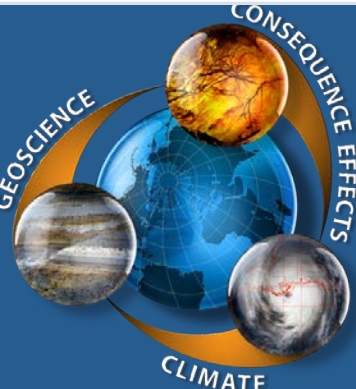


Thursday, December 17

Abstract MR41D-2681 Mechanical Characterization of Mancos Shale Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall	
Authors Scott Broome Sandia National Laboratories Mathew Ingraham Sandia National Laboratories Thomas Dewers Sandia National Laboratories	
Abstract MR41D-2673 Multiscale imaging of carbonate rocks and representative sampling for digital rock physics Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall	
Authors Hongkyu Yoon Sandia National Lab Thomas Dewers Sandia National Laboratories	
Abstract MR41C-2669 Multiscale Multiphysics Caprock Seal Analysis: A Case Study of the Farnsworth Unit, Texas, USA Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall	
Authors Jason Heath Sandia National Laboratories Thomas Dewers Sandia National Laboratories Peter Mozley New Mexico Tech	
Session MR41C Shale, Mudstone, and Clay Mineral Multiphysics I Posters Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall	Chairs Edward Matteo Sandia National Laboratories Timothy Kneafsey Lawrence Berkeley National Laboratory Thomas Dewers Sandia National Laboratories Hari Viswanathan Los Alamos National Laboratory
Primary Convener Thomas Dewers Sandia National Laboratories	
Conveners Edward Matteo Sandia National Laboratories Jason Heath Sandia National Laboratories Hari Viswanathan Los Alamos National Laboratory	
Session MR41D Traditional and Digital Sedimentary Rock Properties I Posters Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall	Chairs Mathew Ingraham Sandia National Laboratories Hongkyu Yoon Sandia National Lab Kathleen Issen Clarkson University Thomas Dewers Sandia National Laboratories
Primary Convener Mathew Ingraham Sandia National Laboratories	
Conveners Hongkyu Yoon Sandia National Lab Kathleen Issen Clarkson University Thomas Dewers Sandia National Laboratories	
Session A42B: Black- and Brown-Carbon Light-Absorbing Aerosols: Attribution, Quantification, and Impact III Thursday, 17 December 2015 10:20 - 12:20 Moscone West- 3004	Conveners Ray Bambha Sandia National Laboratories Joshua Schwarz NOAA ESRL
Primary Convener Hope Michelsen Sandia National Laboratories	Chairs Hope Michelsen Sandia National Laboratories Ray Bambha Sandia National Laboratories Joshua Schwarz NOAA Boulder
Abstract H41C-1314 Characterizing 3-D flow velocity in evolving pore networks driven by CaCO3 precipitation and dissolution Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall	
Authors Kirsten Chojnicki Sandia National Laboratories Hongkyu Yoon Sandia National Lab Mario Martinez Sandia National Laboratories	
Abstract MR41D-2689 Evolution of Elastic Moduli for High Porosity Sandstone under True-Triaxial Stress Conditions Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall	
Authors Melissa Richards Clarkson University Mathew Ingraham Sandia National Laboratories Kathleen Issen Clarkson University	
Abstract MR41C-2651 Characterization of Heat-treated Clay Minerals in the Context of Nuclear Waste Disposal Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall	
Author Edward Matteo Sandia National Laboratories	
Abstract B43B-0547 PFLOTRAN: Recent Developments Facilitating Massively-Parallel Reactive Biogeochemical Transport Thursday, 17 December 2015 13:40 - 18:00 Moscone South - Poster Hall	
Author Glenn Hammond Sandia National Laboratories	
Abstract MR41B-2629: Numerical Investigation of Fracture Propagation in Geomaterials Thursday, 17 December 2015 08:00 - 12:20 Moscone South Poster Hall	
Author Pania Newell (Meshgin) Sandia National Laboratories	
Session GC43C Quantifying Uncertainty in Climate, Earth System, Integrated Assessment, and Impact Models and Observations II Posters Thursday, 17 December 2015 13:40 - 18:00 Moscone South - Poster Hall	Conveners Elisabeth Lloyd Indiana University Bloomington Jaideep Ray Sandia National Laboratories Linda Mearns NCAR
Primary Convener Donald Lucas Lawrence Livermore National Laboratory	Chairs Jaideep Ray Sandia National Laboratories Maoyi Huang Pacific Northwest National Laboratory Donald Lucas Lawrence Livermore National Laboratory Elisabeth Lloyd Indiana University Bloomington
Session A41M Black- and Brown-Carbon Light-Absorbing Aerosols: Attribution, Quantification, and Impact II Thursday, 17 December 2015 08:00 - 10:00 Moscone West- 3004	Conveners Ray Bambha Sandia National Laboratories Joshua Schwarz NOAA ESRL
Primary Convener Hope Michelsen Sandia National Laboratories	Chairs Hope Michelsen Sandia National Laboratories Joshua Schwarz NOAA Boulder Ray Bambha Sandia National Laboratories



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Abstract
[MR43A-01 3D Printing and Digital Rock Physics for Geomaterials](#)
Thursday, 17 December 2015 13:40 - 14:00 Moscone South - 301

Authors
[Mario Martinez](#) Sandia National Laboratories
[Hongkyu Yoon](#) Sandia National Lab
[Thomas Dewers](#) Sandia National Laboratories

Session
[MR43A Traditional and Digital Sedimentary Rock Properties II](#)
Thursday, 17 December 2015 13:40 - 15:40 Moscone South - 301

Primary Convener
[Mathew Ingraham](#) Sandia National Laboratories

Conveners
[Hongkyu Yoon](#) Sandia National Lab
[Kathleen Issen](#) Clarkson University
[Thomas Dewers](#) Sandia National Laboratories

Chairs
[Mathew Ingraham](#) Sandia National Laboratories
[Hongkyu Yoon](#) Sandia National Lab

Abstract
[H43K-02 Spatial Persistence of Macropores and Authigenic Clays in a Reservoir Sandstone: Implications for Enhanced Oil Recovery and CO₂ Storage](#)
Thursday, 17 December 2015 13:55 - 14:10 Moscone West - 3018

Author [Thomas Dewers](#) Sandia National Laboratories

Abstract
[C43C-0811 AMF3 ARM’s Research Facility at Oliktok Point Alaska](#)
Thursday, 17 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors
[Fred Helsel](#) Sandia National Laboratories
[Daniel Lucero](#) Sandia National Laboratories
[Mark Ivey](#) Sandia National Labs
[Darielle Dexheimer](#) Sandia National Laboratories
[Joe Hardesty](#) Sandia National Laboratories
[Erika Roesler](#) Sandia National Laboratories

Abstract
[C43C-0812 Scientific Infrastructure to Support Atmospheric Science and Aerosol Science for the Department of Energy’s Atmospheric Radiation Measurement Programs at Barrow, Alaska.](#) Thursday, 17 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors
[Daniel Lucero](#) Sandia National Laboratories
[Mark Ivey](#) Sandia National Labs
[Fred Helsel](#) Sandia National Laboratories
[Joe Hardesty](#) Sandia National Laboratories
[Darielle Dexheimer](#) Sandia National Laboratories

Abstract
[C43C-0810 Scientific Infrastructure To Support Manned And Unmanned Aircraft, Tethered Balloons, And Related Aerial Activities At Doe Arm Facilities On The North Slope Of Alaska](#)
Thursday, 17 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors
[Mark Ivey](#) Sandia National Labs
[Darielle Dexheimer](#) Sandia National Laboratories
[Joe Hardesty](#) Sandia National Laboratories
[Daniel Lucero](#) Sandia National Laboratories
[Fred Helsel](#) Sandia National Laboratories

Abstract
[C43C-0809 Tethered Balloon Operations at ARM AMF3 Site at Oliktok Point, AK](#)
Thursday, 17 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors
[Darielle Dexheimer](#) Sandia National Laboratories
[Daniel Lucero](#) Sandia National Laboratories
[Fred Helsel](#) Sandia National Laboratories
[Joe Hardesty](#) Sandia National Laboratories
[Mark Ivey](#) Sandia National Labs

Abstract
[MR41C-2649 Alteration of Mancos Shale by synthetic hydrofracturing fluid](#)
Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall

Authors
[Jessica Kruichak](#) Sandia National Laboratories
[Anastasia Ilgen](#) Sandia National Laboratories

Abstract
[GC43C-1206 Bayesian calibration of the Community Land Model using a multi-chain Markov chain Monte Carlo method](#)
Thursday, 17 December 2015 13:40 - 18:00 Moscone South - Poster Hall

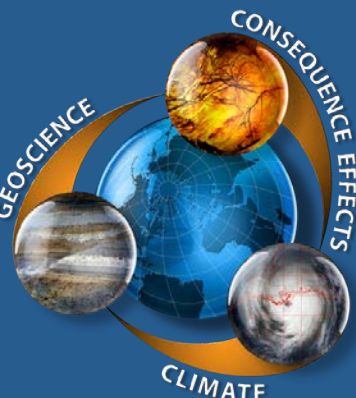
Authors
[Jaideep Ray](#) Sandia National Laboratories
[Laura Swiler](#) Sandia National Laboratories
[Maoyi Huang](#) Pacific Northwest National Laboratory
[Zhangshuan Hou](#) Pacific Northwest National Laboratory

Abstract
[GC43C-1208 Parameter Sensitivity and Transferability Study Across Major US Watersheds](#)
Thursday, 17 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors
[Huiying Ren](#) Pacific Northwest National Laboratory
[Zhangshuan Hou](#) Pacific Northwest National Laboratory
[Maoyi Huang](#) Pacific Northwest National Laboratory
[Jie Bao](#) Pacific Northwest National Laboratory
[Jaideep Ray](#) Sandia National Laboratories
[Yu Sun](#) Tsinghua University
[Teklu Tesfa](#) Pacific Northwest National Laboratory
[L. Ruby Leung](#) Pacific Northwest National Laboratory
[Laura Swiler](#) Sandia National Laboratories



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Abstract
[MR41B-2636 Micromechanical Tests and Geochemical Modeling to Evaluate Evolution of Rock Alteration by CO2-Water Mixtures](#)
Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall

Authors

[Michael Aman](#) *University of Texas at Austin*
[Yuhao Sun](#) *University of Texas at Austin*
[Anastasia Ilgen](#) *Sandia National Laboratories*
[Nicolas Espinoza](#) *University of Texas at Austin*

Session
[MR44A Fractures and Fracturing in Chemically Reactive Environment II](#)
Thursday, 17 December 2015 16:00 - 18:00 Moscone South - 300

Primary Convener

[Jonathan Major](#) *University of Texas at Austin*

Conveners

[Owen Callahan](#) *University of Texas at Austin*
[Pania Newell](#) *Sandia National Laboratories*
[Anastasia Ilgen](#) *Sandia National Laboratories*

Chairs

[Jonathan Major](#) *Bureau of Economic Geology*
[Anastasia Ilgen](#) *Sandia National Laboratories*

Session
[MR41B Fractures and Fracturing in Chemically Reactive Environments I Posters](#)
Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall

Primary Convener

[Jonathan Major](#) *University of Texas at Austin*

Conveners

[Owen Callahan](#) *University of Texas at Austin*
[Pania Newell](#) *Sandia National Laboratories*
[Anastasia Ilgen](#) *Sandia National Laboratories*

Chairs

[Owen Callahan](#) *University of Texas at Austin*
[Pania Newell](#) *Sandia National Laboratories*

Session
[H43K New Perspectives on CO₂ Flow, Transport, and Long-Term Storage in Subsurface Reservoirs II](#)
Thursday, 17 December 2015 13:40 - 15:40 Moscone West - 3018

Primary Convener

[Shibo Wang](#) *Lawrence Berkeley National Laboratory*

Conveners

[Lauren Beckingham](#) *Lawrence Berkeley National Laboratory*
[Megan Smith](#) *Lawrence Livermore National Laboratory*
[Charles Werth](#) *University of Texas at Austin*

Chairs

[Don DePaolo](#) *Lawrence Berkeley National Laboratory*
[Susan Altman](#) *Sandia National Laboratories*

Abstract
[MR41C-2644 Water-Free Shale Stimulation: Experimental Studies of Electrofracturing](#)
Thursday, 17 December 2015 08:00 - 12:20 Moscone South - Poster Hall

Authors

[Stephen Bauer](#) *Sandia National Laboratories*
[Mikhail Geilikman](#) *Shell E&P Research&Development*
[William Gardner](#) *University of Montana*
[Scott Broome](#) *Sandia National Laboratories*
[Steve Glover](#) *Sandia National Laboratories*
[Kenneth Williamson](#) *Sandia National Laboratories*
[Jiann Su](#) *Sandia National Laboratories*

Session
[C43C Technological Advances to Enable Science in the Polar Regions Posters](#)
Thursday, 17 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Primary Convener

[Dale Chayes](#) *LDEO/Columbia University*

Conveners

[Louis Whitcomb](#) *Johns Hopkins Univ*
[Todd Valentic](#) *SRI International El Granada*
[Mark Ivey](#) *Sandia National Labs*

Chairs

[Dale Chayes](#) *LDEO/Columbia University*
[Louis Whitcomb](#) *Johns Hopkins Univ*

Session
[GC41H Quantifying Uncertainty in Climate, Earth System, Integrated Assessment, and Impact Models and Observations I](#)
Thursday, 17 December 2015 08:00 - 10:00 Moscone West - 3001

Primary Convener

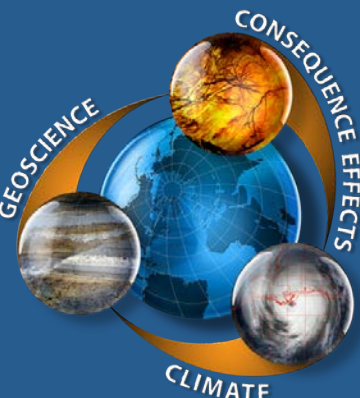
[Donald Lucas](#) *Lawrence Livermore National Laboratory*

Conveners

[Elisabeth Lloyd](#) *Indiana University Bloomington*
[Jaideep Ray](#) *Sandia National Laboratories*
[Linda Mearns](#) *NCAR*

Chairs

[Donald Lucas](#) *Lawrence Livermore National Laboratory*
[Elisabeth Lloyd](#) *Indiana University Bloomington*



Session
[MR51A Shale, Mudstone, and Clay Mineral Multiphysics II](#)
Friday, 18 December 2015 08:00 - 10:00 *Moscone South - 301*

Primary Convener
[Thomas Dewers](#) *Sandia National Laboratories*

Conveners
[Jason Heath](#) *Sandia National Laboratories*
[Hari Viswanathan](#) *Los Alamos National Laboratory*
[Timothy Kneafsey](#) *Lawrence Berkeley National Laboratory*

Chairs
[Jason Heath](#) *Sandia National Laboratories*
[Hari Viswanathan](#) *Los Alamos National Laboratory*
[Timothy Kneafsey](#) *Lawrence Berkeley National Laboratory*
[Thomas Dewers](#) *Sandia National Laboratories*

Session MR52A Shale, Mudstone, and Clay Mineral Multiphysics III Friday, 18 December 2015 10:20 - 12:20 <i>Moscone South - 301</i>	Conveners Edward Matteo <i>Sandia National Laboratories</i> Jason Heath <i>Sandia National Laboratories</i> Hari Viswanathan <i>Los Alamos National Laboratory</i>
Primary Convener Thomas Dewers <i>Sandia National Laboratories</i>	Chairs Edward Matteo <i>Sandia National Laboratories</i> Yifeng Wang <i>Sandia Natl Labs</i> Jason Heath <i>Sandia National Laboratories</i>

Abstract
[H51M-1573 Imaging Fracture Networks Using Angled Crosshole Seismic Logging and Change Detection Techniques](#)
Friday, 18 December 2015 08:00 - 12:20 *Moscone South - Poster Hall*

Authors
[Hunter Knox](#) *Sandia National Laboratories*
[Mark Grubelich](#) *Sandia National Laboratories*
[Leiph Preston](#) *Sandia National Laboratories*
[James Knox](#) *Sandia National Laboratories*
[Dennis King](#) *Sandia National Laboratories*

Abstract
[MR52A-01 Molecular Basis of Clay Mineral Structure and Dynamics in Subsurface Engineering Applications](#)
Friday, 18 December 2015 10:20 - 10:35 *Moscone South - 301*

Author
[Randall Cygan](#) *Sandia National Laboratories*

Abstract
[IN51A-1782 Adaptive Self-Tuning of Seismic Sensors](#)
Friday, 18 December 2015 08:00 - 12:20 *Moscone South - Poster Hall*

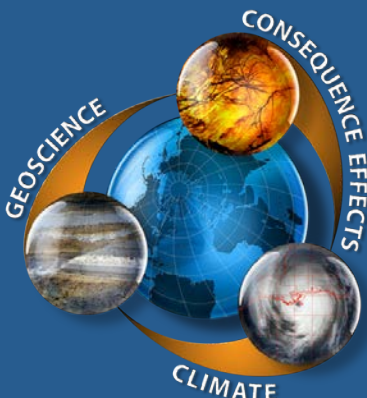
Authors
[Timothy Draelos](#) *Sandia National Laboratories*
[Hunter Knox](#) *Sandia National Laboratories*
[Christopher Young](#) *Sandia National Laboratories*
[Benjamin Lawry](#) *Sandia National Laboratories*
[Eric Chael](#) *Sandia National Laboratories*
[Aleksandra Faust](#) *Sandia National Laboratories*
[Matthew Peterson](#) *Sandia National Laboratories*

Abstract
[S53B-2805 Analysis of a Multi-Stage Sounding Rocket via Ground--Based Infrasonic Observations](#)
Friday, 18 December 2015 13:40 - 18:00 *Moscone South - Poster Hall*

Authors
[Philip Blom](#) *Los Alamos National Laboratory*
[Omar Marcillo](#) *Los Alamos National Laboratory*
[Stephen Arrowsmith](#) *Sandia National Laboratories*

Abstract
[S51C-2697 Detection of Regional Infrasound Signals Using Array Data - Testing, Tuning, and Physical Interpretation](#)
Friday, 18 December 2015 08:00 - 12:20 *Moscone South - Poster Hall*

Authors
[Junghyun Park](#) *Southern Methodist University*
[Brian Stump](#) *Southern Methodist University*
[Chris Hayward](#) *Southern Methodist University*
[Stephen Arrowsmith](#) *Los Alamos National Laboratory*
[Il-Young Che](#) *KIGAM Korea Institute of Geoscience and Mineral Resources*
[Douglas Drob](#) *Naval Research Lab*



Abstract

[S53B-2803 Full Waveform Inversion Methods for Source and Media Characterization before and after SPE5](#)

Friday, 18 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors

- [Kristin Phillips-Alonge](#) Sandia National Laboratories
- [Hunter Knox](#) Sandia National Laboratories
- [Curtis Ober](#) Sandia National Laboratories
- [Robert Abbott](#) Sandia National Laboratories

Abstract

[S53B-2809 Hammering Yucca Flat, Part Two: Shear-Wave Velocity](#)

Friday, 18 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors

- [Tori Finlay](#) Kutztown University of Pennsylvania
- Sandia National Laboratories
- [Robert Abbott](#) Sandia National Laboratories
- [Hunter Knox](#) Sandia National Laboratories
- [David Tang](#) University of Texas at Austin
- [Stephanie James](#) University of Florida
- [Matthew Haney](#) Alaska Volcano Observatory Fairbanks
- [John Hampshire](#) Self Employed

Abstract

[S53B-2808 Hammering Yucca Flat, Part One: P-Wave Velocity](#)

Friday, 18 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors

- [David Tang](#) University of Texas at Austin
- Sandia National Laboratories
- [Robert Abbott](#) Sandia National Laboratories
- [Leiph Preston](#) Sandia National Laboratories
- [John Hampshire](#) Self Employed

Abstract

[S53B-2806 Infrasound Generation from the Source Physics Experiments](#)

Friday, 18 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors

- [Leiph Preston](#) Sandia National Laboratories
- [Kimberly Schramm](#) Sandia National Laboratories
- [Kyle Jones](#) Sandia National Laboratories

Abstract

[S53B-2798 Modeling Seismoacoustic Propagation from the Nonlinear to Linear Regimes](#)

Friday, 18 December 2015 13:40 - 18:00 Moscone South - Poster Hall

Authors

- [Eric Chael](#) Sandia National Laboratories
- [Leiph Preston](#) Sandia National Laboratories

Abstract

[S51F-08 Detecting and Locating Seismic Events Without Phase Picks or Velocity Models](#)

Friday, 18 December 2015 9:45 - 10:00 Moscone South – 305

Authors

- [Stephen Arrowsmith](#) Sandia National Laboratories
- [Christopher Young](#) Sandia National Laboratories
- [Sanford Ballard](#) Sandia National Laboratories
- [Megan Slinkard](#) Sandia National Laboratories

Abstract

[S51F-02 Developing Path-Dependent Uncertainty Estimates for use with the Regional Seismic Travel Time \(RSTT\) Model](#)

Friday, 18 December 2015 08:15 - 08:30 Moscone South - 305

- [Stephen Arrowsmith](#) Sandia National Laboratories
- [Christopher Young](#) Sandia National Laboratories
- [Sanford Ballard](#) Sandia National Laboratories
- [Megan Slinkard](#) Sandia National Laboratories

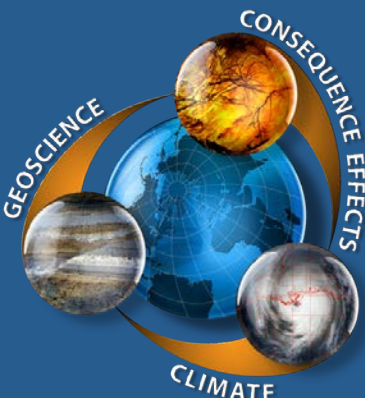
Abstract

C53E-03: Towards quantifying uncertainty in Greenland's contribution to 21st century sea-level rise

Friday, 18 December 2015 14:10 - 14:25 Moscone West - 3005

Authors

- [Mauro Perego](#) Sandia National Laboratories
- [Irina Tezaur](#) Sandia National Laboratories
- [Stephen Price](#) Los Alamos National Laboratory
- [John Jakeman](#) Sandia National Laboratories
- [Mike Eldred](#) Sandia National Laboratories
- [Andy Salinger](#) Sandia National Laboratories
- [Matthew Hoffman](#) Los Alamos National Laboratory



Abstract
[V51H-01 A Perspective on Diagenetic Geometries and Patterns of Iron Oxide Cement and Coloration: Understanding Challenges and Complexities](#)
Friday, 18 December 2015 08:00 - 08:15 Moscone South - 310
Authors [Marjorie Chan](#) *University of Utah*
[Yifeng Wang](#) *Sandia National Laboratories*

Abstract
[MR52A-04 Understanding Radionuclide Interactions with Layered Materials](#)
Friday, 18 December 2015 11:05 - 11:20 Moscone South - 301
Author [Yifeng Wang](#) *Sandia Natl Labs*

Abstract
[V51H-04 Influence of the spatial distribution of cementation on the permeability and mechanical attributes of sedimentary and fault rocks](#)
Friday, 18 December 2015 08:45 - 09:00 Moscone South - 310
Authors
[Peter Mozley](#) *New Mexico Tech*
[Hongkyu Yoon](#) *Sandia National Lab*
[Randolph Williams](#) *University of Wisconsin-Madison Geology*
[Laurel Goodwin](#) *Univ Wisconsin - Madison*

Session
[H51M Subsurface Control of Fractures and Flow for Responsible Energy Production and Storage Posters](#)
Friday, 18 December 2015 08:00 - 12:20 Moscone South - Poster Hall
Primary Convener
[Thomas Daley](#) *Lawrence Berkeley National Laboratory*
Conveners
[Doug Blankenship](#) *Sandia National Laboratories*
[Rajesh Pawar](#) *Los Alamos National Laboratory*
[Alain Bonneville](#) *Pacific Northwest National Laboratory*
Chairs
[Thomas Daley](#) *Lawrence Berkeley National Laboratory*
[Alain Bonneville](#) *Pacific Northwest National Laboratory*

Abstract H51M-1561 The DOE Subsurface (SubTER) Initiative: Revolutionizing Responsible use of the Subsurface for Energy Production and Storage Friday, 18 December 2015 08:00 - 12:20 Moscone South - Poster Hall Authors Susan Hubbard <i>Lawrence Berkeley National Laboratory</i> Marianne Walck <i>Sandia National Laboratories</i> Doug Blankenship <i>Sandia National Laboratories</i>	Alain Bonneville <i>Pacific Northwest National Laboratory</i> Grant Bromhal <i>National Energy Technology Laboratory Morgantown</i> Thomas Daley <i>Lawrence Berkeley National Laboratory</i> Rajesh Pawar <i>Los Alamos National Laboratory</i> Yarom Polsky <i>Oak Ridge National Laboratory</i> Earl Mattson <i>Idaho National Laboratory</i> Robert Mellors <i>Lawrence Livermore National Laboratory</i>
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Abstract
[S53B-2818: Airborne and Ground-Based Optical Characterization of Legacy Underground Nuclear Test Sites](#)
Friday, 18 December 2015 13:40 - 18:00 Moscone South - Poster Hall
Authors
[Steve Vigil](#) *Sandia National Laboratories*
[Julia Craven](#) *Sandia National Laboratories*

Abstract
[S53B-2833 Improved Bulletin Generation Using an Iterative Processing Framework](#)
Friday, 18 December 2015 13:40 - 18:00 Moscone South - Poster Hall
Authors
[Megan Slinkard](#) *Sandia National Laboratories*
[Sanford Ballard](#) *Sandia National Laboratories*
[Andre Encarnacao](#) *Sandia National Laboratories*
[Stephen Heck](#) *Sandia National Laboratories*
[Timothy Draelos](#) *Sandia National Laboratories*
[Eric Chael](#) *Sandia National Laboratories*
[Christopher Young](#) *Sandia National Laboratories*
[Ronald Brogan](#) *ENSCO, Inc*

Abstract
[H52B-07 Sparse Polynomial Chaos Surrogate for ACME Land Model via Iterative Bayesian Compressive Sensing](#)
Friday, 18 December 2015 11:50 - 12:05 Moscone West - 3014
Authors
[Khachik Sargsyan](#) *Sandia National Laboratories*
[Daniel Ricciuto](#) *Oak Ridge National Laboratory*
[Cosmin Safta](#) *Sandia National Laboratories*
[Bert Debusschere](#) *Sandia National Laboratories*
[Habib Najm](#) *Sandia National Laboratories*
[Peter Thornton](#) *Oak Ridge National Laboratory*

Abstract
S53B-2830: SALSA3D: A Global 3D Velocity Model for Improved Seismic Event Location in Nuclear Explosion Monitoring
Friday, 18 December 2015 13:40 - 18:00 Moscone South - Poster Hall
Authors
[Sanford Ballard](#) *Sandia National Laboratories*
[Michael Begnaud](#) *Los Alamos National Laboratory*
[James Hipp](#) *Sandia National Laboratories*
[Andre Encarnacao](#) *Sandia National Laboratories*
[Christopher Young](#) *Sandia National Laboratories*
[William Phillips](#) *Los Alamos National Lab*
[Eric Chael](#) *Sandia National Laboratories*

Abstract
S53B-2825: Using KLSH to Rapidly Search Large Seismic Signal Archives on a Desktop Computer
Friday, 18 December 2015 13:40 - 18:00 Moscone South - Poster Hall
Authors
[Christopher Young](#) *Sandia National Laboratories*
[Jonathan Woodbridge](#) *Sandia National Laboratories*
[Ronald Shaw](#) *Sandia National Laboratories*
[Megan Slinkard](#) *Sandia National Laboratories*

