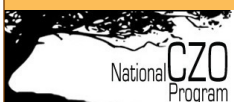




CZO@AGU 2017

December 11-15, 2017
New Orleans, Louisiana



CRITICAL ZONE OBSERVATORIES
studying the zone where rock meets life

funded by NSF



Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Monday, 11 December 2017			
08:00–10:00	U11A: Shale Across All Scales Rm. E2	U11A: Shale Across All Scales STEEFEL, C.I.; BRANTLEY, S.L.; LI, Q.; GU, X.	Shale Hills
08:00–12:20	H11D: Ecohydrological, Hydopedological, and Hydrometeorological Insights from Spatiotemporal Patterns III Posters Poster Hall D–F	H11D-1213: Spatial and Temporal Patterns In Ecohydrological Separation JARVIS, S.K.; BARNARD, H.R.; SINGHA, K.; HARMON, R.E.; SZUTU, D.	Boulder Creek
08:03–08:22	U11A: Shale Across All Scales Rm. E2	U11A-01: Shale across Scales from the Depths of Sedimentary Basins to Soil and Water at Earth's Surface (Invited) BRANTLEY, S.L. AND GU, X.	Shale Hills
09:30–09:45	H11O: Hydroclimatic Extremes: Drought I Rm. 295–296	H11O-07: Evapotranspiration response to multi-year dry periods in the semi-arid western United States RUNGEE, J.P. AND BALES, R.	Southern Sierra
10:20–10:35	B12A: Degraded and Second-Growth Tropical Forests in the Earth System I4 Rm. 383–385	B12A-01: Fragmentation, topography, and forest age modulate impacts of drought on a tropical forested landscape in eastern Puerto Rico (Invited) URIATE, M.; SCHWARTZ, N.; BUDSOCK, A.	Luquillo
10:35–10:50	H22A: A New Generation of Isotopic, Trace Element, and Noble Gas Tracers of Hydrologic Processes I. Rm. 298–299	H22A-02: Decoupling of stream and vegetation solutes during the late stages of weathering: insights from elemental and Mg isotope trends at the Luquillo Critical Zone Observatory, Puerto Rico CHAPELA LARA, M.; SCHUESLLER, J.A.; BUSS, H.L.; MCDOWELL, W.H.	Luquillo
11:20–11:35	B12A: Degraded and Second-Growth Tropical Forests in the Earth System I Rm. 383–385	B12A-05: Assessing biomass accumulation in second growth forests of Puerto Rico using airborne lidar MARTINUZZI, S.; CORP, L.A.; MORTON, D.C.; HELMER, E.; KELLER, M.	Luquillo
13:40–15:40	B13K: The Role of Microbes in Biogeochemical Cycles: Linking Responses to Ecosystem Processes and Environmental Change I Rm. 388–390	B13K: The Role of Microbes in Biogeochemical Cycles: Linking Responses to Ecosystem Processes and Environmental Change I GEBHARDT, M.; ESPINOSA, N.J.; FAIRBANKS, D.; GALLERY, R.E.	Catalina-Jemez

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Monday, 11 December 2017 – Continued			
13:40–18:00	B13F: Terrestrial Ecosystems in a Time of Change: Thresholds, Tipping Points, and Critical Transitions II Posters Poster Hall D–F	B13F-1814: Detection of early warning signals of forest mortality in California LIU, Y.; KUMAR, M.; KATUL, G.G.; PORPORATO, A.M.	Calhoun
13:40–18:00	B13F: Terrestrial Ecosystems in a Time of Change: Thresholds, Tipping Points, and Critical Transitions II Posters Poster Hall D–F	B13F-1819: Microbial C:P stoichiometry is shaped by redox conditions along an elevation gradient in humid tropical rainforests LIN, Y.; GROSS, A.; SILVER, W.L.	Luquillo
13:40–18:00	C13C: Recent Advances in Monitoring, Measuring, and Modeling Snow Processes I Posters Poster Hall D–F	C13C-0981: Spatial Modeling for Resources Framework (SMRF): A modular framework for developing spatial forcing data in mountainous terrain HAVENS, S.; MARKS, D. G.; KORMOS, P.; HEDRICK, A. R.; JOHNSON, M.; ROBERTSON, M.; SANDUSKY, M.	Reynolds Creek
13:40–18:00	H13C: Advances in Watershed Modeling: Hydrologic/Nutrient Processes and Management III Posters Poster Hall D–F	H13C-1382: Accounting for small scale heterogeneity in ecohydrologic watershed models BURKE, W. AND TAGUE, C.	Southern Sierra
14:04–14:22	GC13N: Vegetation and Carbon on a Changing Planet: Perspectives from the New Global Environmental Change Fellows Rm. 260–262	GC13N-02: Predicting Tree Mortality Die-off Events Associated with Hotter Drought and Assessing Their Global Consequences via Ecoclimate Teleconnections. (Invited) BRESHEARS, D.B; ALLEN C.B.; MCDOWELL, N. G.; ADAMS, H.D.; BARNES, M.; BARRON-GAFFORD, G.; BRADFORD, J.B.; COBB, N.; FIELD, J.P.; FROEND, R.; FONTAINE, J.B.; GARCIA, E.; ST. J. HARDY, G.E.; HUXMAN, T.E.; KALA, J.; LAGUE, M.M.; MARTINEZ-YRIZAR, A.; MATUSICK, G.; MINOR, D.M.; MOORE, D.J. NG, M.; RUTHROF, K.X.; SALESKA, S.R.; STARK, S.C.; SWANN, A. L.S.; VILLEGAS, J.C.; WILLIAMS, A.P.; ZOU, C.	Catalina-Jemez
15:28–15:31	U13B: Student Engagement to Enhance Development Rm. 252–254	U13B-37: The influence of Critical Zone structure on runoff paths, seasonal water storage, and ecosystem composition (Invited) HAHM, W.J.; DEITRICH, W.E.; REMPE, D.M.; DRALLE, D.; DAWSON, T.E.; LOVILL, S.; BRYK, A.	Eel River

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Monday, 11 December 2017 – Continued			
16:00–18:00	B14B: The Role of Microbes in Biogeochemical Cycles: Linking Responses to Ecosystem Processes and Environmental Change II Rm. 388–390	B14B: The Role of Microbes in Biogeochemical Cycles: Linking Responses to Ecosystem Processes and Environmental Change II GEBHARDT, M.; ESPINOSA, N.J.; FAIRBANKS, D.; GALLERY, R.E.	Catalina-Jemez
16:15–16:30	B14C: Tropical Forests Under a Changing Climate II Rm. 383–385	B14C-02: Understanding Tropical Forest Abiotic Responses to Canopy Loss and Biomass Deposition from an Experimental Hurricane Manipulation VAN BEUSEKOM, A.; STANKAVITCH, S.; ZIMMERMAN, J.K.	Luquillo
16:15–16:30	H14D: Ecohydrological, Hydropedological, and Hydrometeorological Insights from Spatiotemporal Patterns II Rm. 283–285	H14D-02: Using a spatially-distributed hydrologic biogeochemistry model with nitrogen transport to study the spatial variation of carbon stocks and fluxes in a Critical Zone Observatory SHI, Y.; EISENSTAT, D.M.; HE, Y.; DAVIS, K.J.	Shale Hills
Tuesday, 12 December 2017			
08:00–12:20	B21E: Surface-Atmosphere Interactions: From Single Flux Measurements to Integrated Synthesis I Posters Poster Hall D–F	B21E-1996: Estimation of soil respiration rates and soil gas isotopic composition for the different land use of Ultisols from Calhoun CZO CHERKINSKY, A.; BRECHEISEN, Z.; RICHTER, D.DEB.; SHENG, H.S.	Calhoun
08:00–12:20	H21A: Advances in Subsurface Characterization Using Innovative Methods of Geophysics and Hydrogeology IV Posters Poster Hall D–F	H21A-1439: Critical Zone structure inferred from multiscale near surface geophysical and hydrological data across hillslopes at the Eel River CZO LEE, S.; REMPE, D.M.; HOLBROOK, S.W.; SCHMIDT, L.; HAHM, W.J.; DIETRICH, W.E.	Eel River
08:00–12:20	H21J: Stochastic Modeling of the Hydrosphere and Biosphere I Posters Poster Hall D–F	H21J-1609: Macroscopic behavior and fluctuation-dissipation response of stochastic ecohydrological systems (Invited) PORPORATO, A.M.	Calhoun
08:00–12:20	GC21F: Science at the Frontier: Using Multimethod Research to Create New Knowledge and Assess Tools Across Spatial and Temporal Scales II Posters Poster Hall D–F	GC21F-1000: Gauging leaf-level contributions to landscape-level water loss within a Western US dryland forest MURPHY, P.; POTTS, D.L.; MINOR, R.L.; HAMERLYNCK, E.P.; SUTTER, L.; BARRON-GAFFORD, G.	Catalina-Jemez

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Tuesday, 12 December 2017 – Continued			
08:00–12:20	IN21B: Approaches for Curation to Data Discovery in the Era of Big Data Variety I Posters Poster Hall D–F	IN21B-0038: Brown Dog: A Data Transformation Ecosystem for Research - Advancing from Beta to 1.0 SATHEESAN, S.P.; ALAMEDA, J.; BRADLEY, S.; DEITZE, M.; JANSEN, G.; ZOOPER, R.; KUMAR, P.; LEE, J.; MARCIANO, R.; ET AL.	IML
08:00–12:20	B21D: Integration of Ecosystem Research Infrastructures for Multiscale Analysis I Posters Poster Hall D-F	B21D-1981: Fostering Collaboration Across the U.S. Critical Zone Observatories Network SHARKEY, S. AND WHITE, T.S.	National Office
08:00–12:20	GC21F: Science at the Frontier: Using Multimethod Research to Create New Knowledge and Assess Tools Across Spatial and Temporal Scales II Posters Poster Hall D–F	GC21F-0996: Upscaling Ameriflux observations to assess drought impacts on gross primary productivity across the Southwest BARNES, M.; MOORE, D. J.; SCOTT, R. L.; MACBEAN, N.; PONCE-CAMPOS, G.E.; BRESHEARS, D.D.	Catalina-Jemez
08:00–12:20	H21B: Comparative Disturbance Hydrology: Hydrologic and Geomorphic Effects of Wildland Fire and Other Disturbances from Point to Regional Scales II Posters Poster Hall D–F	H21B-1452: Quantifying Hillslope to Watershed Erosional Response Following Wildfire VEGA, S.; PIERSON, F. B.; WILLIAMS, C. J.; BROOKS, E. S.; STRAND, E. K.; ET AL.	Reynolds Creek
08:00–12:20	H21B: Comparative Disturbance Hydrology: Hydrologic and Geomorphic Effects of Wildland Fire and Other Disturbances from Point to Regional Scales II Posters Poster Hall D–F	H21B-1443: Estimating evapotranspiration change due to forest treatment and fire at the basin scale in the Sierra Nevada, California GOULDEN, M. AND BALES, R.	Southern Sierra
08:15–08:30	EP21H: Shale: From Fracking to Forest I Rm. 352	EP21H-02: The role of fluid mobility in the development of shale weathering profiles: Direct observations from a vadose zone monitoring system (Invited). DRUHAN, J.L.; WANG, J.; CARGILL, S.; MURPHY, C.; TUNE, A.K.; DIETRICH, W.E.; REMPE, D.M.	Eel River
08:15–08:30	B21J: Soil Organic Matter and the Global Carbon Cycle: Mechanisms for Accumulation and Loss in a Changing World I Rm. 386-387	B21J-02: Differential chemical fractionation of dissolved organic matter during sorption by Fe mineral phases in a tropical soil from the Luquillo Critical Zone Observatory. PLANTE, A.F.; COWARD, E.; OHNO, T.; THOMPSON, A.	Luquillo

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Tuesday, 12 December 2017 – Continued			
08:30–08:45	H21M: Advances in Ecohydrology of Water-Stressed Environments II Rm. 295–296	H21M-03: Impact of hydraulic redistribution on multispecies vegetation water use in a semi-arid ecosystem: An experimental and modeling synthesis LEE, E.; KUMAR, P.; BARRON-GAFFORD, G.; SCOTT, R.L.; HENDRYX, S. M; SANCHEZ-CANETE, E. P.; MINOR, R. L.; COLELLA, A.	IML Catalina-Jemez
08:30–08:45	EP21H: Shale: From Fracking to Forest I Rm. 352	EP21H-03: Understanding the hydrologic and geochemical control of regolith formation on shale in a hilly landscape XIAO, D.; BRANTLEY, S.L.; LI, LI	Shale Hills
08:45–09:00	EP21H: Shale: From Fracking to Forest I Rm. 352	EP21H-04: A Reactive Transport Model for Marcellus Shale Weathering LI, L.; HEIDARI, P.; JIN, L.; WILLIAMS, J.; BRANTLEY, S.L.	Shale Hills
08:45–09:45	C21H: The Nye Lecture and Honored Member Presentations Rm. La Nouvelle C	C21H-04: Making up for lost snow: lessons from a warming Sierra Nevada (Invited) BALES, R.	Southern Sierra
10:35 - 10:50	ED22A: Climate Literacy: Delivering Climate Change Science Content, Pedagogy, and Data Resources to K-12 Educators, Future Teachers, and Professional Development Providers II Rm. 245	ED22A-02: Climate Change Literacy across the Critical Zone Observatory Network DERRY, L. A.; MOORE, A.; ZABEL, I.; DUGGAN-HAAS, D.; ROSS, R. M.	National Office
10:50–11:05	H22A: A New Generation of Isotopic, Trace Element, and Noble Gas Tracers of Hydrologic Processes I Rm. 298–299	H22A-03: Hydrologic and environmental controls on uranium-series and strontium isotope ratios in a natural weathering environment WHITE, A.M.; MA, L.; MORAVEC, B.G.; MCINTOSH, J.C.; CHOROVER, J.	Catalina-Jemez
13:40–13:55	H23K: A New Generation of Isotopic, Trace Element, and Noble Gas Tracers of Hydrologic Processes II Rm. 298–299	H23K-01: New Applications of Cosmogenic Radioactive Isotopes to Study Water Travel Times (Invited) VISSER, A.; THAW, M.; DINHART, A.; BIBBY, R. K.; ESSER, B.	Southern Sierra
13:40–18:00	H23H: Plants as Builders and Plumbers of the Critical Zone I Posters Poster Hall D–F	H23H-1777: How soil water storage moderates climate changes effects on transpiration, across the different climates of the Critical Zone Observatories HECKMAN, C. AND TAGUE, C.	Cross-CZO

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Tuesday, 12 December 2017 – Continued			
13:40–18:00	H23H: Plants as Builders and Plumbers of the Critical Zone I Posters Poster Hall D–F	H23H-1767: Beyond Tree Throw: Wind, Water, Rock and the Mechanics of Tree-Driven Bedrock Physical Weathering (Invited) MARSHALL, J.A.; ANDERSON, R.S.; DAWSON, T.E.; DIETRICH, W.E.; MINEAR, J.T.	Boulder Creek Eel River
13:40–18:00	H23H: Plants as Builders and Plumbers of the Critical Zone I Posters Poster Hall D–F	H23H-1780: The Dual Role of Vegetation as a Constraint on Mass and Energy Flux into the Critical Zone and as an Emergent Property of Geophysical Critical Zone Structure BROOKS, P.D.; SWETNAM, T.L.; BARNARD, H.R.; SINGHA, K.; HARPOLD, A.; LITVAK, M.E.	Boulder Creek Catalina-Jemez
13:40–18:00	B23D: The Role of Microbes in Biogeochemical Cycles: Linking Responses to Ecosystem Processes and Environmental Change III Posters Poster Hall D–F	B23D-2097: The potential for iron reduction in upland soils in Calhoun Critical Zone Observatory THOMPSON, A.; CHEN, C.; NOOR, N.; HODGES, C.A.; BARCELLOS, D.; RICHTER D.DEB.	Calhoun
13:40–18:00	H23H: Plants as Builders and Plumbers of the Critical Zone I Posters Poster Hall D–F	H23H-1768: Soil weathering agents are limited where deep tree roots are removed, even after decades of forest regeneration BILLINGS, S.A.; RICHTER, D.DEB.; HIRMAS, D.; LEHMEIER, C.; BAGCHI, S.; BRECHEISEN, Z.; SULLIVAN, P.L.; MIN, K.; HAUSER, E.; STAIR, R.; FLOURNOY, R.	Calhoun
13:40–18:00	H23H: Plants as Builders and Plumbers of the Critical Zone I Posters Poster Hall D–F	H23H-1771: Illuminating pathways of forest nutrient provision: relative release from soil mineral and organic pools HAUSER, E. AND BILLINGS, S.A.	Calhoun Shale Hills
13:40–18:00	H23H: Plants as Builders and Plumbers of the Critical Zone I Posters Poster Hall D–F	H23H-1781: Gilbert's soil production paradigm applied to a critical zone's fractionation of particle sizes RICHTER, D.DEB.; AUSTIN, J.; ANDERSON, R.S.; BACON, A.R.; BRANTLEY, S.L.; BRECHEISEN, Z.; SCHROEDER, P.S.; WADE, A.; HOLBROOK, S.W.; MARCON, V.; THOMPSON, A.	Calhoun Boulder Creek Shale Hills
13:40–18:00	H23H: Plants as Builders and Plumbers of the Critical Zone I Posters Poster Hall D–F	H23H-1779: Temporal dynamics of tree source water in sky island ecosystems with ephemeral snow pack: a case study using <i>Pseudotsuga menziesii</i> (Douglas Fir) PAPUGA, S. A. AND HAMANN, L.	Catalina-Jemez

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Tuesday, 12 December 2017 – Continued			
13:40–18:00	B23C: Plant-Soil Interactions in the Rhizosphere: Experimental and Computational Advances II Posters Poster Hall D–F	B23C-2076: Coupled Modeling of Rhizosphere and Reactive Transport Processes ROQUE-MALO, S. AND KUMAR, P.	IML
13:40–18:00	B23E: Vegetation Canopies: Physiology, Structure, Function II Posters Poster Hall D–F	B23E-2118: Incorporating Explicit LiDAR Derived Canopy Spatial Patterns in Ecohydrologic Modeling WANG, K. AND KUMAR, P.	IML
13:40–18:00	H23C: Diagnostics, Sensitivity, and Uncertainty Analysis of Earth and Environmental Models III Posters Poster Hall D–F	H23C-1678: Understanding Information Flow Interaction along Separable Causal Paths in Environmental Signals JIANG, P. AND KUMAR, P.	IML
13:40–18:00	H23D: Groundwater-Surface Water Interactions: Identifying and Integrating Physical, Biological, and Chemical Patterns and Processes Across Scales V Posters Poster Hall D–F	H23D-1689: Controls on the Environmental Fate of Compounds Controlled by Coupled Hydrologic and Reactive Processes HIXSON, J.; WARD, A.S.; MCONVILLE, M.; REMUCAL, C.	IML
13:40–18:00	H23H: Plants as Builders and Plumbers of the Critical Zone I Posters Poster Hall D–F	H23H-1775: Accounting for Ecohydrologic Separation Alters Interpreted Catchment Hydrology CAIN, M.R.; WARD, A.S.; HRACHOWITZ, M.	IML
13:40–18:00	NH23E: Late-Breaking Research Related to the 2017 Hurricane Season in the Americas (Harvey, Irma, Jose, Maria): Poster Contributions Poster Hall D-F	NH23E-2879: Short-term impacts of Hurricanes Irma and Maria on tropical stream chemistry as measured by in-situ sensors. MCDOWELL, W.H.; POTTER, J.; LOPEZ-LLOREDA, C.	Luquillo
13:40–18:00	B23D: The Role of Microbes in Biogeochemical Cycles: Linking Responses to Ecosystem Processes and Environmental Change III Posters Poster Hall D-F	B23D-2088: Anoxic conditions drive phosphorus limitation in humid tropical forest soil microorganisms GROSS, A.; PETT-RIDGE, J.; WEBER, P.K.; BLAZEWICZ, S.; SILVER, W.L.	Luquillo

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Tuesday, 12 December 2017 – Continued			
13:40–18:00	H23H: Plants as Builders and Plumbers of the Critical Zone I Posters Poster Hall D–F	H23H-1769: Predicting Plant-Accessible Water in the Critical Zone: Mountain Ecosystems in a Mediterranean Climate KLOS, P.Z.; GOULDEN, M.; RIEBE, C.S.; TAGUE, C.; O’GEEN, A.T.; FLINCHUM, B. A.; SAFEEQ, M.; CONKLIN, M.H.; HART, S.C.; BERHE, A.A.; HARTSOUGH, P.C.; HOLBROOK, S.; BALES R.C.	Southern Sierra
13:40–18:00	H23I: Terrestrial-Aquatic Linkages in the Context of Land Use/Land Cover Change: Contemporary and Legacy Effects on Physical and Biogeochemical River Processes II Posters Poster Hall D–F	H23I-1800: Stream structure at low flow: biogeochemical patterns in intermittent streams over space and time MACNEILLE, R.B.; LOHSE, K.A.; GODSEY, S.; MCCORKLE, E.P.; PARSONS, S.; BAXTER, C.	Reynolds Creek
13:40–18:00	Session - EP23C: Shale: From Fracking to Forest II PostersII D-F Poster Ha	EP23C-1938: Subsurface particle loss during shale weathering can alter soil and rock chemistry KIM, H.; GU, X.; BRANTLEY, S.L.	Shale Hills
13:40–18:00	Session - EP23C: Shale: From Fracking to Forest II Posters Poster Hall D-F	EP23C-1939: Critical Zone Evolution Across a Shale Climosequence DENTON DERE, A.L.; SANTINI, T.; PARCHER, S.; NYANGARI, S.; WARREN, K.	Shale Hills
13:40–18:00	Session - EP23C: Shale: From Fracking to Forest II Posters Poster Hall D-F	EP23C-1941: A Geochemical and Structural Geologic Look at Methane Rich Waters Near a Problematic Shale Gas Well WODA, J.; WEN, T.; OAKLEY, D.O.; BRANTLEY, S.L.	Shale Hills
13:40–18:00	B23E: Vegetation Canopies: Physiology, Structure, Function II Posters Poster Hall D-F	B23E-2126: Slope position and Soil Lithological Effects on Live Leaf Nitrogen Concentration SZINK, I.; ADAMS, T.S.; ORR, A.S.; EISSENSTAT, D.M.	Shale Hills
14:10–14:25	B23G: Remote Sensing in Terrestrial Ecosystems: Cross-Scale Approaches to Understanding Structure, Function, and Process II Rm. 383–385	B23G-03: Earlier Snowmelt Changes the Ratio Between Early and Late Season Forest Productivity KNOWLES, J.F.; MOLOTCH, N.P.; TRUJILLO, E.; LITVAK, M.E.	Boulder Creek
14:10–14:25	EP23E: Detrital Records of Climate-Driven Changes in Erosion, Sediment Flux, and Deposition from Source to Sink I Rm. 352	EP23E-03: A Quaternary record of periglacial surface processes preserved in a headwater valley in central Pennsylvania DEL VECCHIO, J.; DIBIASE, R.A.; BIERMAN, P.R.; DENN, A.	Shale Hills

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Tuesday, 12 December 2017 – Continued			
16:20–16:35	ED24A: Climate Literacy in Higher Education: Challenges and Opportunities in Research and Evaluation II Rm. 245	ED24A-02: Teaching climate science within the transdisciplinary framework of Critical Zone science (Invited) WHITE, T.S.; WYMORE, A.; DERE, A.L.D.; WASHBURN, J.C.; HOFFMAN, A.; CONKLIN, M.	National Office Shale Hills Luquillo Catalina-Jemez Southern Sierra

Wednesday, 13 December 2017

08:00–08:05	B31H: Integration of Ecosystem Research Infrastructures for Multiscale Analysis II Rm. 383-385	B31H-01: Using the Critical Zone Observatory Network to Put Geology into Environmental Science (Invited) BRANTLEY; S.L.	Shale Hills
08:00–12:20	EP31A: Changing the Channel: Fluvial System Response to Climate and Land Use Change II Posters Poster Hall D–F	EP31A-1832: Working Towards Interpreting Strath Terraces as Records of Climate Change: Evaluating a Model of Lateral Bedrock Erosion LANGSTON, A.L. AND TUCKER, G.E.	Boulder Creek
08:00–12:20	B31E: Using Omics-Based Approaches to Link Biotic and Abiotic Processes in Subsurface Environments Posters Poster Hall D–F	B31E-2033: Microbial community assembly patterns under incipient conditions in a basaltic soil system SENGUPTA, A.; STEGEN, J.; MEIRA NETO, A.A.; WANG, Y.; CHOROVER, J.; TROCH, P.A.; MAIER, R.A.	Catalina-Jemez
08:00–12:20	H31F: Interfacing Hydrology and Microbiology: Combining Hydrologic Tools with Microbiological Methods to Study Subsurface Ecosystems I Posters Poster Hall D–F	H31F-1577: Establishment of quantitative hydrological indexes for studies of hydro-biogeochemical interactions at the subsurface. MEIRA NETO, A.A.; SENGUPTA, A.; WANG, Y.; VOLKMANN, T.; CHOROVER, J.; TROCH; P.A.	Catalina-Jemez
09:45–10:00	H31J: Advances in Petrophysics and Coupled Processes for Hydrogeophysics and Near-Surface Geophysics I Rm. 298–299	H31J-08: An integrated geophysical and geochemical exploration of critical zone weathering on opposing montane hillslope (Invited) SINGHA, K.; NAVARRE-STICHLER, A.; POMMER, R.E.; NOVITSKY, C.G.; HOLBROOK W.S.; MOORE, J.	Boulder Creek
10:35–10:50	H32D: Mixing and Reactive Transport Processes in Hydrological Systems Across Scales II Rm. 288–290	H32D-02: Magnesite Dissolution Rates Across Scales: Role of Spatial Heterogeneity, Equilibrium Lengths, and Reactive Time Scales WEN, H. AND LI, L.	Shale Hills

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Wednesday, 13 December 2017 – Continued			
11:20–11:35	EP32B: Sediment Dynamics Across Landscapes: Steep and Low-Relief Terrains II Rm. 353–355	EP32B-05: The influence of hillslope-derived blocks on erosion rate-channel steepness scaling: Emergence of variable threshold behavior SHOBE, C.M.; TUCKER, G.E.; ROSSI, M.	Boulder Creek
13:40–18:00	EP33B: Sediment Dynamics Across Landscapes: Steep and Low-Relief Terrains IV Posters Poster Hall D–F	EP33B-1938: The Breakdown: Hillslope Sources of Channel Blocks in Bedrock Landscapes SELANDER, B.; ANDERSON, S.P.; ROSSI, M.	Boulder Creek
13:40–18:00	H33B: Advances in Understanding Land-Atmosphere Interactions in a Changing Environment V Posters Poster Hall D–F	H33B-1673: A flux footprint analysis to understand ecosystem fluxes in an intensively managed landscape HERNANDEZ RODRIGUEZ, L.C.; GOODWELL, A.E.; KUMAR, P.	IML
13:40–18:00	EP33C: The Development and Application of Chronometers in Geomorphology II Posters Poster Hall D–F	EP33C-1950: Mountain erosion over decades and millennia: New insights from sediment yields and cosmogenic nuclides CALLAHAN, R.P.; RIEBE, C.S.; FERRIER K.	Southern Sierra
13:40–18:00	H33A: Advances in Petrophysics and Coupled Processes for Hydrogeophysics and Near-Surface Geophysics II Posters Poster Hall D–F	H33A-1645: Quantifying Seasonal Dynamic Water Storage in a Fractured Bedrock Vadose Zone With Borehole Nuclear Magnetic Resonance SCHMIDT, L.; MINTON, B.; SOTO-KERANS, N.; REMPE, D.M.; HEIDARI, Z.	Eel River
14:10–14:25	EP33F: Mountain Peak to Seafloor: Processes, Interactions, and Feedbacks Between Sediment Supply and Landscape Evolution I Rm. 352	EP33F-03: Tool-effect: Controls on Landscape Persistence (Invited). WILLENBRING, J.K.; BROCARD, G.Y.; SALLES, T.; HARRISON, E.J.	Luquillo
14:10–14:25	B33G: Soil Carbon Dynamics at Broad Scales: Linking Mechanistic Knowledge to Broad-Scale Applications I Rm. 386–387	B33G-03: Deep Soil Carbon in the Critical Zone: Amount and Nature of Carbon in Weathered Bedrock, and its Implication for Soil Carbon Inventory MORELAND, K.C.; TIAN, Z.; BERHE, A.A.; O'GEEN, A.T.	Southern Sierra
14:25–14:40	B33G: Soil Carbon Dynamics at Broad Scales: Linking Mechanistic Knowledge to Broad-Scale Applications I Rm. 386–387	B33G-04: Modeling Coupled Landscape Evolution and Soil Organic Carbon Dynamics in Intensively Management Landscapes YAN, Q. AND KUMAR, P.	IML

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Wednesday, 13 December 2017 – Continued			
15:15–15:25	PA33D: Science to Action: Building Novel and Transformative Partnerships Toward Decision-Relevant Science I Rm. 255–257	PA33D-10: Developing decision-relevant data and information systems for California water through listening and collaboration BALES, R.C.; BERNACCHI, L.; CONKLIN, M.H.; VIERS, J.H.; FOGG, G.E.; FISHER, A.T.; KIPARKY, M.	Southern Sierra

Thursday, 14 December 2017

08:00–12:20	H41D: Emerging Technologies in Hydrologic Remote Sensing: Drones, Proximal Sensing Using Cosmic Ray Neutron Probes, and More III Posters Poster Hall D–F	H41D-1470: Improving Understanding of Spatial Heterogeneity in Mountain Ecohydrology with Multispectral Unmanned Aerial Systems (UAS). WIGMORE, O. AND MOLOTCH, N.P.	Boulder Creek
08:00–12:20	H41G: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales III Posters Poster Hall D–F	H41G-1524: Effects of Precipitation Type on Streamflow Efficiency At Critical Zone Observatories in the Western United States. HALE, K.	Boulder Creek Reynolds Creek
08:00–12:20	EP41C: Mountain Peak to Seafloor: Processes, Interactions, and Feedbacks Between Sediment Supply and Landscape Evolution II Posters Poster Hall D–F	EP41C-1851: A Layered Past: the Transformation and Development of Legacy Sediments as Alluvial Soils WADE, A. AND RICHTER, D.DEB.	Calhoun
08:00–12:20	H41G: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales III Posters Poster Hall D–F	H41G-1533: Stochastic Dynamics of Clay Translocation and Formation of Argillic Horizons CALABRESE, S.; RICHTER, D.DEB.; PORPORATO, A.M.	Calhoun
08:00–12:20	H41I: Runoff Generation Processes in Changing Environments: Integrating Observations and Processes II Posters Poster Hall D–F	H41I-1560: Terrain and subsurface influences on runoff generation in a steep, deep, highly weathered system MCDEVITT MALLARD, J.; MCGLYNN, B.L.; RICHTER, D.DEB.	Calhoun
08:00–12:20	H41C: Catchment Science: Process Understanding and Societal Benefits from Long-Term Observation, Research, and Experimentation II Posters Poster Hall D–F	H41C-1449: Hydrologic functioning of the deep Critical Zone and contributions to streamflow in a high elevation catchment: testing of multiple conceptual models DWIVEDI, R.; MEIXNER, T.; MCINTOSH, J.C.; FERRE T.P.A.; EASTOE, C.J.; MINOR, R.L.; BARRON-GAFFORD, G.; CHOROVER, J.	Catalina-Jemez

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Thursday, 14 December 2017 – Continued			
08:00–12:20	H41C: Catchment Science: Process Understanding and Societal Benefits from Long-Term Observation, Research, and Experimentation II Posters Poster Hall D–F	H41C-1451: Impact of Wildfire on Solute Release in Forested Catchments, Jemez River, New Mexico, USA SANCHEZ, R.A.; MEIXNER, T.; MCINTOSH, J.C.; CHOROVER, J.	Catalina-Jemez
08:00–12:20	B41E: Soil Carbon Dynamics at Broad Scales: Linking Mechanistic Knowledge to Broad-Scale Applications II Posters Poster Hall D–F	B41E-2011: Toward a standardized soil carbon database platform in the US Critical Zone Observatory Network FILLEY, T.R.; MARINI, L.; TODD-BROWN, K.E.; MALHOTRA, A.; HARDEN, J.W.; KUMAR, P.	IML
08:00–12:20	B41E: Soil Carbon Dynamics at Broad Scales: Linking Mechanistic Knowledge to Broad-Scale Applications II Posters Poster Hall D–F	B41E-2015: Correlative assessment of two predictive soil hydrology models with measured surface soil geochemistry MING L.; FILLEY, T.R.; LE, P.V.; KUMAR, P.; YAN, Q.; PAPANICOLAOU, T.; HOU, T.; WANG, J.	IML
08:00–12:20	H41G: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales III Posters Poster Hall D–F	H41G-1525: Modeled post-glacial landscape evolution at the southern margin of the Laurentide Ice Sheet: hydrological connection of uplands controls the pace and style of fluvial network expansion LAI, J. AND ANDERS, A.M.	IML
08:00–12:20	H41F: Linking Catchment Biogeochemistry and Hydrology to Understand Freshwater Landscapes in the Anthropocene II Posters Poster Hall D–F	H41F-1515: Dissolved Greenhouse Gas Concentration Patterns and Relationships with Stream Chemistry in Tropical Headwater Streams LOPEZ-LLOREDA, C.; MCDOWELL, W.H.; POTTER, J.	Luquillo
08:00–12:20	H41C: Catchment Science: Process Understanding and Societal Benefits from Long-Term Observation, Research, and Experimentation II Posters Poster Hall D–F	H41C-1460: The Value of Long-Term Research at the Five USGS WEBB Catchments SHANLEY, J.; MURPHY S.F.; SCHOLL, M.A.; WICKLAND, K.; AULENBACH, B.T.; HUNT, R.; CLOW; D.W.	Luquillo
08:00–12:20	H41G: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales III Posters Poster Hall D–F	H41G-1538: Parameterization of Nitrogen Limitation for a Dynamic Ecohydrological Model: a Case Study from the Luquillo Critical Zone Observatory. BATISH, S. AND BRAS, R.L.	Luquillo

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Thursday, 14 December 2017 – Continued			
08:00–12:20	H41G: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales III Posters Poster Hall D–F	H41G-1534: Scaling up: What coupled land-atmosphere models can tell us about critical zone processes FITZGERALD, K.A.; MASARIK, M.T.; RUDISILL, W.J.; GELB, L.; FLORES, A.N.	Reynolds Creek
08:00–12:20	B41F: Soil Organic Matter and the Global Carbon Cycle: Mechanisms for Accumulation and Loss in a Changing World IV Posters Poster Hall D–F	B41F-2028: Carbon dioxide effluxes and their environmental controls in sagebrush steppe ecosystems along an elevation gradient in the Reynolds Creek Critical Zone Observatory LOHSE, K. A.; FELLOWS, A.; FLERCHINGER, G. N.; SEYFRIED, M. S.	Reynolds Creek
08:00–12:20	H41G: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scale III Posters Poster Hall D–F	H41G-1539: Spatial Variability of Soil-Water Storage in the Southern Sierra Critical Zone Observatory: Measurement and Prediction OROZA, C.; BALES, R. C.; ZHENG, Z.; GLASER, S. D.	Southern Sierra
08:00–12:20	H41C: Catchment Science: Process Understanding and Societal Benefits from Long-Term Observation, Research, and Experimentation II Posters Poster Hall D–F	H41C-1450: Sediment Concentration and Its Relation to Catchment Characteristics in Forested Headwater Streams of the Sierra Nevada, California WAGENBRENNER, J.; SAFEEQ, M.; HUNSAKER, C.	Southern Sierra
9:15 - 09:30	H41Q: Water and Society: Modeling Basin Storage and Human Interventions to the Terrestrial Water Cycle Across Scales I Rm. 280–282	H41Q-06: Identifying the Dynamic Catchment Storage That Does Not Drive Runoff DRALLE, D.; HAHM, W.J.; REMPE, D.M.; KARST, N.; THOMPSON, S.E.; DIETRICH, W.E.	Eel River
10:50–11:05	H42H: Understanding the Extent and Impacts of Land Use/Land Cover Change on Water Resources I Rm. E3	H42H-03: Streamflow response to future land-cover change at a headwaters catchment spanning the alpine-subalpine transition on the Colorado Front Range BARNHART, T.B.; VUKOMANOVIC, J.; BOURGERON, P.; MOLOTCH, N.P.	Boulder Creek
10:50–10:55	PA42A: How Does Your Geoscience Research Matter, and Can You Explain How It Matters to the Public? Rm. 255–257	PA42A-07: Sustainable California: Getting the word out through a web-based TV channel BALES, R. C.; BERNACCHI, L.; CONKLIN, M. H.; SAFEEQ, M.; VIERS, J. H.; GILMORE, M.	Southern Sierra

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
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Thursday, 14 December 2017 – Continued

10:55–11:00	PA42A: How Does Your Geoscience Research Matter, and Can You Explain How It Matters to the Public? Rm. 255–257	PA42A-08: Critical Transition in Critical Zone of Intensively Managed Landscapes KUMAR, P.	IML
11:10–11:15	PA42A: How Does Your Geoscience Research Matter, and Can You Explain How It Matters to the Public? Rm. 255–257	PA42A-11: Every rural resident knows that the geosciences matter! RICHTER, D.DEB.	Calhoun
12:30–13:30	CZO Town Hall Rm. 208–209	TH43C: Critical Zone Observatories: Platforms for Collaborative Science WHITE, T.S.; MCDOWELL, W.H.; BRANTLEY, S.L.	Cross-CZO
13:40–13:55	H43O: Catchment Science: Process Understanding and Societal Benefits from Long-Term Observation, Research, and Experimentation I Rm. La Nouvelle C	H43O-01: Hydrologic Synthesis Across the Critical Zone Observatory Network: A Step Towards Understanding the Coevolution of Critical Zone Function and Structure WLOSTOWSKI, A.N.; HARMAN, C.J.; MOLOTCH, N.P.	Cross-CZO
13:40–13:55	H43S: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales I Rm. 298–299	H43S-01: Simulation Based Exploration of Critical Zone Dynamics in Intensively Managed Landscapes KUMAR, P.	IML
13:40–15:40	H43S: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales I Rm. 298–299	H43S: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales I LI, LI; VERECKEN, H.; KUMAR, P.; ARORA, B.	Shale Hills
13:40–15:40	H43S: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales I Rm. 298–299	H43S-04: Understanding controls of hydrologic processes across two headwater monolithological catchments using model-data synthesis XIAO, D.; SHI, Y.; HOAGLAND, B.; DEL VECCHIO, J.; RUSSO, T.A.; DIBIASE, R.A.; LI, LI	Shale Hills
13:40–18:00	H43C: Blue and Green Water in Cold Mountains: Changes in Climate, Hydrologic Regimes, Extreme Events, and Ecological Responses II Posters Poster Hall D–F	H43C-1656: Catchment Integration of Sensor Array Observations to Understand Hydrologic Connectivity REDFERN, S.; LIVNEH, B.; MOLOTCH, N.P.; SUDING, K.; NEFF, J.C.; HINCKLEY, E.S.	Boulder Creek

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
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Thursday, 14 December 2017 – Continued

13:40–18:00	H43J: Understanding the Extent and Impacts of Land Use/Land Cover Change on Water Resources II Posters Poster Hall D–F	H43J-1782: Patterns in Soil Electrical Resistivity Across Land Uses in the Calhoun Critical Zone Observatory Landscape MARKEWITZ, D.; SUTTER, L.; RICHTER, D.DEB.	Calhoun
13:40–18:00	B43A: Advancing Understanding of Hydrological and Biogeochemical Interactions in Terrestrial Ecosystems Through Large-Scale Model Systems Posters Poster Hall D–F	B43A-2105: Controlled experiments of hillslope co-evolution at the Biosphere 2 Landscape Evolution Observatory: toward prediction of coupled hydrological, biogeochemical, and ecological change <i>(Invited)</i> VOLKMANN, T.H.M.; SENGUPTA, A.; PANGLE, L.; ABRAMSON, N.; BARRON-GAFFORD, G.; BRESHEARS, D.B.; BUGAJ, A; ET AL.	Catalina–Jemez
13:40–18:00	B43A: Advancing Understanding of Hydrological and Biogeochemical Interactions in Terrestrial Ecosystems Through Large-Scale Model Systems Posters Poster Hall D–F	B43A-2114: Carbon and nitrogen accumulation and fluxes on Landscape Evolution Observatory (LEO) slopes DONTSOVA, K.; VOLK, M.; WEBB, C.; HUNT, E.; TFAILY, M.M.; VAN HAREN, J.L.M.; SENGUPTA, A.; CHOROVER, J.; TROCH, P.; RUIZ, J.	Catalina–Jemez
13:40–18:00	B43E: Concentration–Discharge Relations in the Critical Zone I Posters Poster Hall D–F	B43E: Concentration–Discharge Relations in the Critical Zone I Posters CHOROVER, J.; GAILLARDET, J.; MCDOWELL, W.H.; DRUHAN, J.L.	Catalina–Jemez Luquillo Eel River
13:40–18:00	B43E: Concentration–Discharge Relations in the Critical Zone I Posters Poster Hall D–F	B43E-2178: Changes in DOM Character and Composition during Spring Snow Melt in the Jemez River Basin Critical Zone Observatory. THOMPSON, M.; OLSHANSKY, Y.; CHOROVER, J.	Catalina–Jemez
13:40–18:00	B43E: Concentration-Discharge Relations in the Critical Zone I Posters Poster Hall D–F	B43E-2175: Particulate Organic Carbon (POC) and Particulate N (PN) behaviors in Response to Storm Events in the Clear Creek, IA Site of the Intensively Managed Landscape – Critical Zone Observatory (IML-CZO) BLAIR, N.E.; WARD, A.S.; BETTIS, E.A.; ZHOU, N.; KAZMIERCZAK, B.M.	IML

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Thursday, 14 December 2017 – Continued			
13:40–18:00	GC43G: Climate Extremes Under Global Warming: Characterizing Impacts and Managing Risk in a Changing World II Posters Poster Hall D–F	GC43G-1139: The role of mountain precipitation as a drought buffer in Puerto Rico: Assessing natural systems resilience to change. SCHOLL, M.; CLARK, K.C.; VAN BEUSEKOM, A.; SHANLEY, J.B.; TORRES-SANCHEZ, A.; MURPHY, S.; GONZALEZ, G.	Luquillo
13:40–18:00	H43J: Understanding the Extent and Impacts of Land Use/Land Cover Change on Water Resources II Posters Poster Hall D-F	H43J-1778: Qualitatively Modeling solute fate and transport across scales in an agricultural catchment with diverse lithology WAYMAN, C.R.; RUSSO, T.A.; LI, L.; FORSYTHE, B.; HOAGLAND, B.	Shale Hills
13:40–18:00	H43C: Blue and Green Water in Cold Mountains: Changes in Climate, Hydrologic Regimes, Extreme Events, and Ecological Responses II posters Poster Hall D–F	H43C–1658: Improving snow water equivalent simulations in an alpine basin using blended gage precipitation and snow pillow measurements SOHRABI, M.; SAFEEEQ, M.; CONKLIN, M. H.	Southern Sierra
14:10–14:25	H43S: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales I Rm. 298–299	H43S-03: Discerning Thermodynamic Basis of Self-Organization in Critical Zone Structure and Function RICHARDSON, M. AND KUMAR, P.	IML
14:40–14:55	H43S: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales I Rm. 298–299	H43S-05: Modeling Aspect Controlled Formation of Seasonally Frozen Ground on Montane Hillslopes: a Case Study from Gordon Gulch, Colorado RUSH, M.; RAJARAM, H.; ANDERSON, R.S.; AND ANDERSON, S.P.	Boulder Creek
14:55–15:10	H43O: Catchment Science: Process Understanding and Societal Benefits from Long-Term Observation, Research, and Experimentation I Rm. La Nouvelle C	H43O-06: Benefits of Long-term Catchment/Observatory Research: Reynolds Creek Case SEYFRIED, M. S.; MARKS, D. G.; PIERSON, F. B.; LOHSE, K. A.; FLERCHINGER, G. N.	Reynolds Creek
15:10–15:25	H43S-07: Elucidating Critical Zone Process Interactions with an Integrated Hydrology Model in a Headwaters Research Catchment Rm. 298–299	H43S: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales I COLLINS, C. AND MAXWELL, R.M.	Southern Sierra

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Thursday, 14 December 2017 – Continued			
16:00–16:15	H44C: Advances in Understanding Land-Atmosphere Interactions in a Changing Environment IV Rm. 293–294	H44C-01: Process connectivity reveals ecohydrologic sensitivity to drought and rainfall pulses GOODWELL, A. E. AND KUMER, P.	IML, Reynolds Creek Southern Sierra
16:45–17:00	H44G: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales II Rm. 298–299	H44G-04: Hydrologic Drivers of Soil Organic Carbon Erosion and Burial: Insights from a Spatially-explicit Model of a Degraded Landscape at the Calhoun Critical Zone Observatory BRAS, R.L.; DIALYNAS, Y.G.; RICHTER, D.DEB.	Calhoun
17:00–17:15	H44G: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines Rm. 298–299	H44G-05: Effects of Climate on Co-evolution of Weathering Profiles and Hillscapes ANDERSON, R.S.; RAJARAM, H.; ANDERSON, S.P.	Boulder Creek
17:30–17:45	IN44A: Challenges and Benefits of Open-Source Software and Open Data II Rm. 228–230	IN44A-07: ODM2 Admin Pilot Project – A Data Mangement Application for Observations of the Critical Zone. LEON, M.; MCDOWELL, W.H.; MAYORGA, E.; SETIAWAN, L.; HOOPER, R.P.	Luquillo
17:45–18:00	H44G: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales II Rm. 356–357	B54A-08: Understanding the Role of the Co-Play between Land Use and Climate on Sediment Flux Laws in Intensively Managed Landscapes ABBAN, B.; PAPANICOLAOU, T.; WILSON, C.; GIANNOPOULOS, C.; SIVAPALAN, M.	IML
17:45–18:00	H44G: Modeling the Critical Zone: Integrating Processes and Data Across Disciplines and Scales II Rm. 298–299	H44G-08: Multi-scale geophysical study to model the distribution and development of fractures in relation to the knickpoint in the Luquillo Critical Zone Observatory (Puerto Rico) COMAS, X.; WRIGHT, W.J.; HYNEK, S.A.; NTARLAGIANNIS, D.; TERRY, N.; JOB, M.J.; FLETCHER, R.C.; BRANTLEY, S.L.	Luquillo
08:00–12:20	EP51B: Landslides and Landscape Evolution: Mechanisms and Feedbacks II Posters Poster Hall D–F	EP51B-1638: Rainfall influence on styles of mass movement ANDERSON, S.P.; RENGERS, F.K.; FOSTER, M.A.; WINCHELL, E.W.; ANDERSON, R.S.	Boulder Creek

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Friday, 15 December 2017			
8:00 – 12:20	B51D: From Enzymes to Ecosystems: Temperature Response in the Biosphere I Posters Poster Hall D–F	B51D-1831: Microbial Community Activity And Plant Biomass Are Insensitive To Passive Warming In A Semiarid Ecosystem ESPINOSA, N.J.; FEHMI, J.S.; RASMUSSEN, C.; GALLERY, R.E.	Catalina-Jemez
8:00 – 12:20	A51C: Land-Atmosphere Interactions, Biosphere-Boundary Layer Feedbacks, and Moist Convection I Posters Poster Hall D–F	A51C-2069: A Force-restore Model of Near-surface Air Temperature using a New Parameterization of Sensible Heat Flux HUANG, S. AND WANG, J.	Calhoun
08:00–12:20	H51B: Budyko and Beyond: Advances and Applications of a Simple Water and Energy Balance Model II Posters Poster Hall D–F	H51B-1260: Catchment-scale groundwater recharge and vegetation water use efficiency TROCH, P.A.; DWIVEDI, R.; LIU, T.; MEIRA, A.; ROY, T.; VALDÉS-PINEDA, R.; DURCIK, M.; ARCINIEGA, S.; BRENA-NARANJO, J.A.	Catalina-Jemez
08:00–12:20	EP51A: Emerging Technologies and Advances in Identifying Catchment Sediment Sources II Posters Poster Hall D–F	EP51A-1634: Floodplains as a source of fine sediment in grazed landscapes: tracing the source of suspended sediment in the headwaters of an intensively managed agricultural landscape YU, M.; RHOADS, B.L.; STUMPF, A	IML
08:00–12:20	B51E: Impacts to Water and Nutrient Cycles in Ecosystems Following Disturbance I Posters Poster Hall D–F	B51E-1849: Interaction of Land Management Intensity and Micro-topography Controls on Geochemistry of Raindrop-Liberated/Mobilized Soil Particles HOU, T.; FILLEY, T.R.; BERRY, T.; SINGH, S.; HIGHER, M.; TONG, Y.; PAPANICOLAOU, T.; WACHA, K.; WILSON, C.G.; CHAUBEY, I.	IML
08:00–12:20	B51I: When and Where Does Biology Matter? Identifying Physical and Biological Controls on Organic Matter Fluxes and Fate in Aquatic Ecosystems II Posters Poster Hall D–F	B51I-1936: Carbon and nitrogen stoichiometry across stream ecosystems WYMORE, A.; KAUSHAL, S.; MCDOWELL, W.H.; KORTELAJINEN, P.; BERNHARDT, E.; JOHNES, P.; DODDS, W.; JOHNSON, S.; BROOKSHIRE, J.; SPENCER, R.; RODRIQUES- CARDONA, B.; HELTON, A.; BARNES. R.; ALGERICH, A.; HAQ, S.; SULLIVAN, P.; LOPEZ-LLOREDA, C.; COBLE, A.; DALEY, M.	Luquillo
08:00–12:20	B51G: Past, Present, and Future of Dryland Ecosystems: Local Trends to Global Impacts II Posters Poster Hall D–F	B51G-1901: Winter CO2 efflux from cold semiarid sagebrush shrublands distributed across the rain-to-snow transition zone FELLOWS, A.; FLERCHINGER, G.N.; LOHSE, K.A.; SEYFRIED, M.S.	Reynolds Creek

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Friday, 15 December 2017 – Continued			
08:00–12:20	H51C: Characterization, Modeling, and Remediation of Karst and Structurally Variable Flow Systems in a Changing Environment III Posters Poster Hall D–F	H51C-1287: Comparing preferential flow and soil moisture dynamics in two catchments of contrasting lithology TANG, Q.; GUO, L.; EISSENSTAT, D.M.; LIN, H.	Shale Hills
08:00–12:20	IN51E: Data and Tools for Knowledge Discovery Around the Energy-Water Nexus I posters Poster Hall D–F	IN51E-0054: A Gap-Filling Procedure for Hydrologic Data Based on Kalman Filtering and Expectation Maximization: Application to Data from the Wireless Sensor Networks of the Sierra Nevada COOGAN, A.; AVANZI, R.; CONKLIN, M.H.; BALES, R.C.; GLASER, S.	Southern Sierra
08:00–12:20	GC51A: Climate Change and Fire Regimes in Mountain Ecosystems: Toward Actionable Predictions and Projections Posters Poster Hall D–F	GC51A-0789: A Coupled Model for Simulating Future Wildfire Regimes in the Western U.S. BART, R. R.; KENNEDY, M. C.; TAGUE, C.; HANAN, E. J.	Southern Sierra
09:30–09:45	H51A: Advances in Coupled Human-Natural Systems Modeling for Water and Land Resources Management II Posters Poster Hall D–F	H51A-1249: Communicating why land surface heterogeneity matters TAGUE, C.; BURKE, W.; BART, R. R.; TURPIN, E.; WOOD, T.; GORDON, D.	Southern Sierra
10:20–10:35	EP51D: Complexity in Geomorphological Systems: Networks, Connectivity, and Self-Organization I Rm. 352	EP51D-07: Steady evolution of hillslopes in layered landscapes: self-organization of a numerical hogback GLADE, R. AND ANDERSON, R.S.	Boulder Creek
10:20–12:20	B52A: Agricultural Systems: Links Between Hydrology and Biogeochemical Cycling II Rm. 383–385	B52A03: Enhanced conversion of newly-added maize straw to soil microbial biomass C under plastic film mulching and organic manure management JIN, X. AND FILLEY, T.R.	IML
11:20–11:35	EP52B: Landslides and Landscape Evolution: Mechanisms and Feedbacks I Rm. 353–355	EP52B-05: A Dynamic Hydrology-Critical Zone Framework for Rainfall-triggered Landslide Hazard Prediction DIALYNAS, Y.G.; FOUFOULA-GEORGIOU, E.; DIETRICH, W.E.; BRAS, R.L.	Eel River Calhoun

Time of Presentation	Session/Location Information	Presentation Title/Author(s)	Affiliation
Friday, 15 December 2017 – Continued			
13:40–13:55	C52B: Quantifying Spatial and Temporal Variability of Snow and Snow Processes II Rm. 271–273	C52B-01: The Spatial and Temporal Variability of Meltwater Flowpaths: Insights from a grid of over 100 Snow Lysimeters WEBB, R.; WILLIAMS, M.W.; ERICKSON, T.	Boulder Creek
13:40–18:00	EP53D: Where Things Aren't: Understanding the Role of Porosity in the Critical Zone Posters Poster Hall D–F	EP53D-1770: The role of rock moisture on regulating hydrologic and solute fluxes in the critical zone (Invited) REMPE, D.M.; DRUHAN, J.; HAHM, W.J.; WANG, J.; MURPHY, C.; CARGILL, S.; DIETRICH, W.E.; TUNE, A.K.	Eel River
13:40–18:00	H53C: Balancing the Water Budget: A Physical Basis for Quantifying Water Fluxes Using Data and Models II Posters Poster Hall D–F	H53C-1460: On the effectiveness of recession analysis methods for capturing the characteristic storage-discharge relation: An intercomparison study CHEN, X.; KUMAR, M.; BASSO, S.; MARANI, M.	Calhoun
13:40–18:00	H53G: Linking Dynamic Watershed Processes Across Spatial and Temporal Scales II Posters Poster Hall D–F	H53G-1560: Linking carbon and hydrologic fluxes in the critical zone: Observations from high-frequency monitoring of a weathered bedrock vadose zone TUNE, A.K.; DRUHAN, J.; WANG, J.; CARGILL, S.; MURPHY, C.; REMPE, D.M.	Eel River
13:40–18:00	EP53D: Where Things Aren't: Understanding the Role of Porosity in the Critical Zone Posters Poster Hall D–F	EP53D-1763: Landuse legacies of old-field succession and soil structure at the Calhoun Critical Zone Observatory in SC, USA BRECHEISEN, Z.; RICHTER, D.DEB.; CALLAHAM, M.; CARRERA-MARTINEZ, R.; HEINE, P.	Calhoun
13:40–18:00	EP53D: Where Things Aren't: Understanding the Role of Porosity in the Critical Zone Posters Poster Hall D–F	EP53D-1764: Insights into the base of the critical zone from geophysical logging and groundwater flow testing at U.S. Critical Zone Observatories (CZO) and critical zone study sites (CZs) CARR, B.; ZHANG, Y.; REN, S.; FLINCHUM, B.A.; PARSEKIAN, A.; HOLBROOK, S.W.; RIEBE, C.S.; MORAVEC, B.G.; CHOROVER, J.; PELLETIER, J.D.; RICHTER, D.DEB.	Calhoun Catalina-Jemez Southern Sierra
13:40–18:00	ED53I: Teaching Systems Thinking: Integrating Earth and Global Change Science into Formal and Informal Education I Posters Poster Hall D–F	ED53I-0234: Using the NGSS to Analyze the NGSS Suggests Teaching the Critical Zone to Improve NGSS Implementation DUGGAN-HAAS, D.; ROSS, R.M.; WHITE, T.S.	National Office

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Friday, 15 December 2017 – Continued			
13:40–18:00	B53H: Characterizing Spatial and Temporal Variability of Hydrological and Biogeochemical Processes Across Scales II Rm. 386–387	B53H-01: Biogeochemical control points in a water-limited critical zone (Invited) CHOROVER, J.; BROOKS, P.D.; GALLERY, R.E.; MCINTOSH, J.C; OLSHANSKY, Y.; RASMUSSEN, C.	Catalina-Jemez
13:40–18:00	EP53C: Response of Earth Surface and Subsurface Processes to Rare, Extreme Events II Posters Poster Hall D–F	EP53C-1756: Catchment-scale redistribution of lithogenic solutes and black carbon over three years following wildfire in the Jemez Mountains, New Mexico, USA POHLMANN, M.A.; ROOT, R.; ABRELL, L.; SCHWARTZ, C.J.; CHOROVER, J.	Catalina-Jemez
13:40–18:00	B53B: Agricultural Systems: Links Between Hydrology and Biogeochemical Cycling III Posters Poster Hall D–F	B53B-1960: Tracing Sources of Organic Matter in a Midwestern USA Reservoir using Online Tetramethylammonium Hydroxide (TMAH) Thermochemolysis MORGAN HAYES, J. AND BLAIR, N.E.	IML
13:40–18:00	B53B: Agricultural Systems: Links Between Hydrology and Biogeochemical Cycling III Posters Poster Hall D–F	B53B-1961: Nutrient Concentrations and Stable Isotopes of Runoff from a Midwest Tile-Drained Corn Field WILKINS, B.J.; WOO, D.; LI, J.; MICHALSKI, G.M.; KUMAR, P.; CONROY, J.L.; KEEFER, D.A.; KEEFER, L.L.; HODSON, T.O.	IML
13:40–18:00	H53G: Linking Dynamic Watershed Processes Across Spatial and Temporal Scales II Posters Poster Hall D–F	H53G-1552: Spatiotemporal Heterogeneity of Dissolved Organic Carbon in Waters and Soils in a Snow-dominated Headwater Catchment: Investigations at Reynolds Creek Critical Zone Observatory, Owyhee County, Idaho RADKE, A. G.; GODSEY, S.; KOHSE, K. A.; HUBER, D. P.; PATTON, N. R.; HOLBROOK, S.	Reynolds Creek
13:40–18:00	EP53D: Where Things Aren't: Understanding the Role of Porosity in the Critical Zone Posters Poster Hall D–F	EP53D-1767: Porosity evolution during weathering of Marcellus shale GU, X. AND BRANTLEY, S.L.	Shale Hills
13:40–18:00	EP53D: Where Things Aren't: Understanding the Role of Porosity in the Critical Zone Posters Poster Hall D–F	EP53D-1769: The Evolution of Porosity During Weathering of Serpentinite and the Creation of Thin Regolith in the Appalachian Piedmont MARCON, V.; GU, X.; BRANTLEY, S.L.	Shale Hills

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Friday, 15 December 2017 – Continued			
13:40–18:00	H53A: Addressing Environmental Concerns of Hydraulic Fracturing Focusing on Water Quantity and Quality II Posters Poster Hall D–F	H53A-1437: Reactive Transport of Marcellus Shale Waters in Natural Aquifers: the Role of Mineralogical Compositions and Spatial Distribution Patterns CAI, Z; WEN, H.; LI, LI	Shale Hills
13:40–18:00	EP53D: Where Things Aren't: Understanding the Role of Porosity in the Critical Zone Posters Poster Hall D–F	EP53D-1762: The influence of subsurface porosity and bedrock composition on ecosystem productivity and drought resilience in the Sierra Nevada Batholith, California (Invited) RIEBE, C. S.; CALLAHAN, R. P.; GOULDEN, M.; PASQUEST, S.; FLINCHUM, B. A.; TAYLOR, N. J.; HOLBROOK S.	Southern Sierra
13:40–18:00	EP53D: Where Things Aren't: Understanding the Role of Porosity in the Critical Zone Posters Poster Hall D–F	EP53D-1764: Insights into the base of the critical zone from geophysical logging and groundwater flow testing at U.S. Critical Zone Observatories (CZO) and critical zone study sites (CZs) CARR, B.; ZHANG, Y.; REN, S.; FLINCHUM, B.A.; PARSEKIAN, A.; HOLBROOK, W.S.; RIEBE, C.S.; MORAVEC, B.G.; CHOROVER, J.; PELLETIER, J.D.; RICHTER, D.DEB.	Catalina-Jemez Calhoun Southern Sierra Boulder Creek Eel River Reynolds Creek
13:40–18:00	H53F: Hyper-Resolution Hydrologic Modeling: Progress and Challenges III Posters Poster Hall D–F	H53F-1530: The Performance of the Hybrid-3D Hydrological Model at the Catchment Scale HAZENBERG, P.; PELLETIER, J.D.; TROCH, P.A.; ZENG, X.	Catalina-Jemez
13:40–18:00	B54A: Concentration-Discharge Relations in the Critical Zone II Poster Hall D-F	B54A-07: Evolution of concentration-discharge relations revealed by high frequency diurnal sampling of stream water during spring snowmelt OLSHANSKY, Y.; WHITE, A.M.; THOMPSON, M.; MORAVEC, B.G.; MCINTOSH, J.C.; CHOROVER, J.	Catalina-Jemez
14:10–14:25	C53B: Quantifying Spatial and Temporal Variability of Snow and Snow Processes III Posters Poster Hall D–F	C53B-1025: Using wireless sensor networks to improve understanding of rain-on-snow events across the Sierra Nevada MAURER, T.; AVANZI, F.; OROZA, C.; MALEK, S. A.; GLASER, S. D.; BALES, R. C.; CONKLIN, M. H.	Southern Sierra

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Friday, 15 December 2017 – Continued			
14:10–14:25	B53H: Characterizing Spatial and Temporal Variability of Hydrological and Biogeochemical Processes Across Scales II Rm. 386–387	B53H-03: Elemental Redistribution at the Onset of Soil Genesis from Basalt as Measured in a Soil Lysimeter System WANG, Y.; UMANZOR, M.; MEIRA NETO, A.A.; SENGUPTA, A.; AMISTADI, M.K.; ROOT, R.; TROCH, P.A.; CHOROVER, J.	Catalina-Jemez
15:10–15:25	EP53E: Emerging Technologies and Advances in Identifying Catchment Sediment Sources Rm. 353–355	EP53E-07: Tracking channel bed resiliency in forested mountain catchments using high temporal resolution channel bed movement CONKLIN, M. H.; MARTIN, S.	Southern Sierra
16:00–18:00	B54A: Concentration-Discharge Relations in the Critical Zone II Rm. 356–357	B54A: Concentration-Discharge Relations in the Critical Zone II CHOROVER, J.; GAILLARDET, J.; MCDOWELL, W.H.; DRUHAN, J.L.	Catalina-Jemez Luquillo Eel River
16:00–18:00	B54A: Concentration-Discharge Relations in the Critical Zone II Rm. 356–357	B54A-02: Perennial flow through convergent hillslopes explains chemodynamic solute behavior in a shale headwater catchment HERNDON, E.; STEINHOEFEL, G.; DENTON DERE, A.L. AND SULLIVAN, P.L.	Shale Hills
16:00–18:00	H54B: Characterization, Modeling, and Remediation of Karst and Structurally Variable Flow Systems in a Changing Environment II Rm. 288–290	H54B-03: Subsurface Hydrologic Processes Revealed by Time-lapse GPR in Two Contrasting Soils in the Shale Hills CZO GUO, L.; LIN, H.; NYQUIST, J.; TORAN, L.; MOUNT, G.	Shale Hills
17:15–17:30	B54A: Concentration-Discharge Relations in the Critical Zone II Rm. 356–357	B54A-03: Cross-site comparisons of concentration-discharge relationships reveal climate-driven chemostatic set points GODSEY, S. AND KIRCHNER, J. W.	Reynolds Creek
17:30–17:45	B54A: Concentration-Discharge Relations in the Critical Zone II Rm. 356–357	B43E-2172: Relating runoff generation mechanisms to concentration-discharge relationships in catchments with well-characterized Critical Zone structures and hydrologic dynamics. HAHM, W.J.; WANG, J.; DRUHAN, J.L.; REMPE, D.M.; DIETRICH, W.E.	Eel River
17:30–17:45	B54A: Concentration-Discharge Relations in the Critical Zone II Rm. 356–357	B54A-06: Mechanisms Generating Chemostatic Si-discharge Relationships in Granitoid Catchments of the Critical Zone Network AGUIRRE, A. AND DERRY, L.	Boulder Creek National Office

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17:45–18:00	B54D: Progress in Biogeochemical Research of the Worlds Large Rivers II Rm. 386-387	B54D-08: Partitioning Concentration-Discharge Patterns of Weathering Products from Monolithologic Catchments to Global Rivers (Invited) IBARRA, D.; MOON, S.; WINNICK, M.; WYMORE, A.; CAVES, J.; CHAMBERLAIN, C.P.; MCDOWELL, W.H.; MAHER, K.	Cross-CZO
17:45–18:00	H54D: Multihypothesis Modeling and the Role of Process Representations in Prediction of Ecological and Hydrological Systems I Rm. 298–299	H54D-08: Intercomparing model configurations with varied erosion, deposition and transport representations for simulating sediment yield KUMAR, M.; ZI, T.; AND ALBERTSON, J.D.	Calhoun