LPSC 2021

Session Title		Presentation Title	Date	Start Time	Time Zone	Track	Speaker Name
Monday, March 15, 2021							
Special Session: Exploring Myriad Ocean Worlds	1	In Search of Subsurface Oceans Within the Moons of Uranus	March 15, 2021	11:05 am	CDT	Track 1	Corey Cochrane
	2	Intense Geologic Activity on Triton for Billions of Years After Orbital Capture	March 15, 2021	11:08 am	CDT	Track 1	Noah Hammond
	3	Recent Advances in Magnetic Induction from Asymmetric Ocean Worlds	March 15, 2021	11:11 am	CDT	Track 1	Marshall Styczinski
	4	The Europa Clipper Gravity/Radio Science Investigation	March 15, 2021	11:14 am	CDT	Track 1	Erwan Mazarico
	5	Europa Lander Mission Concept (Update 2021)	March 15, 2021	11:17 am	CDT	Track 1	Kevin Hand
	6	Does Triton's Ice Cap Reveal Its Internal Heat and Ocean?	March 15, 2021	11:20 am	CDT	Track 1	Michael Sori
	7	The Topography of Ganymede (and Callisto): Geology, Global Characteristics, and Future Exploration	March 15, 2021	11:23 am	CDT	Track 1	Paul Schenk
	8	Predicting the Seawater Chemistry of an Ocean World Using Machine Learning on Isotopic Measurements of CO_2	March 15, 2021	11:26 am	CDT	Track 1	Bethany Theiling
Lunar Magnetism: Unraveling the History of the Interior of the Moon Through Its Magnetic Properties	1	A Lunar Dynamo Powered by Core Convection and a Basal Magma Ocean	March 15, 2021	11:05 am	CDT	Track 2	Saira Hamid
	2	Short-Lived Lunar Dynamos Powered by Accretion of Cold Impactor Core Material	March 15, 2021	11:08 am	CDT	Track 2	Fiona Nichols-Fleming
	3	A New Large-Scale Map of the Lunar Crustal Magnetic Field and Its Interpretation	March 15, 2021	11:11 am	CDT	Track 2	Lon Hood
	4	Shock Demagnetization Does Not Fully Explain Variations in the Lunar Paleointensity Record	March 15, 2021	11:14 am	CDT	Track 2	Ji-In Jung
	5	Magnetic Domain Behavior and Interpretation in Apollo Samples	March 15, 2021	11:17 am	CDT	Track 2	Becky Strauss
	6	Modeling Thermal Demagnetization at the Lunar Swirl Reiner Gamma	March 15, 2021	11:20 am	CDT	Track 2	Megan Seritan
	7	Regolith Characteristics of the Reiner Gamma Swirl as Revealed by Polarimetric Observations	March 15, 2021	11:23 am	CDT	Track 2	Megha Bhatt
	8	New M-Cube Insights on the Character of the Mysterious Reiner Gamma Swirls	March 15, 2021	11:26 am	CDT	Track 2	Carle Pieters
Presolar Grains, IDPs, Other Early Solar System Materials	1	NRLEE Nucleosynthesis	March 15, 2021	11:05 am	CDT	Track 3	Bradley Meyer
	2	Multielement Isotopic Compositions of Presolar SiC from Asymptotic Giant Branch Stars	March 15, 2021	11:08 am	CDT	Track 3	Nan Liu

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	3	A Presolar Silicon Carbide Grain of Type C with Extremely Low 12C/13C Ratio	March 15, 2021	11:11 am	CDT	Track 3	Peter Hoppe
	4	TEM Studies of Presolar SiC Grains: Insights into Circumstellar Conditions and Implications for IR Spectroscopy	March 15, 2021	11:14 am	CDT	Track 3	Sheryl Singerling
	5	Presolar Grain Abundance Variation in the Miller Range 090019 CO3.1 Chondrite	March 15, 2021	11:17 am	CDT	Track 3	Lan-Anh Nguyen
	6	Origin of low-Ca Pyroxenes in Comet Aamples: Evidence for Igneous Formation in the Nebula Like Chondrules	March 15, 2021	11:20 am	CDT	Track 3	David Joswiak
	7	Oxygen Isotope Systematics of Crystalline Silicates in a Giant Cluster IDP: A Genetic Link to Wild 2 Particles and Primitive Chondrite Chondrules	March 15, 2021	11:23 am	CDT	Track 3	Mingming Zhang
	8	Oxygen Isotopic Compositions of Hydrated Interplanetary Dust Particles: Implications for Aqueous Alteration in Outer Solar System Objects	March 15, 2021	11:26 am	CDT	Track 3	Lindsay Keller
MSL Curiosity Results I: Exploration of Glen Torridon	1	Contextualizing CRISM Observations of the Clay-Bearing Glen Torridon Region with the Mars Science Laboratory Curiosity Rover	March 15, 2021	11:05 am	CDT	Track 4	Valerie Fox
	2	The Mineralogy and Sedimentary History of the Glen Torridon Region, Gale Crater, Mars	March 15, 2021	11:08 am	CDT	Track 4	Michael Thorpe
	3	K-Rich Rubbly Bedrock at Glen Torridon, Gale Crater, Mars: Investigating the Possible Presence of Illite	March 15, 2021	11:11 am	CDT	Track 4	Agnes Cousin
	4	The Chemistry and Morphology of Diagenetic Features in Glen Torridon, Gale Crater	March 15, 2021	11:14 am	CDT	Track 4	Patrick Gasda
	5	Diagenesis in the Glen Torridon Region of Gale Crater, Mars Using VNIR Spectral Data from Curiosity Rover	March 15, 2021	11:17 am	CDT	Track 4	Amanda Rudolph
	6	Characterization of Clasts in the Glen Torridon Region Observed by the MSL Curiosity Rover	March 15, 2021	11:20 am	CDT	Track 4	Sabrina Khan
	7	Characteristics of the Fractured Intermediate Unit from Orbital and Curiosity-Based Data	March 15, 2021	11:23 am	CDT	Track 4	Madison Hughes

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	8	APXS Geochemistry of the Fractured Intermediate Unit (FLU) — Its Relationship to Underlying Glen Torridon Units and Overlying Pediment Rocks at the Greenheugh Unconformity	March 15, 2021	11:26 am	CDT	Track 4	Catherine O'Connell-Cooper
Small Body Impacts: CSI Dimorphos	1	Low-Velocity Collision Dynamics on Earth vs. Small-Bodies	March 15, 2021	11:05 am	CDT	Track 5	Cecily Sunday
	2	Seismic Waves in the Asteroid Environment — Impactor Momentum	March 15, 2021	11:08 am	CDT	Track 5	Diego Sánchez
	3	A New Model of Seismicity on Asteroids Implied by the SCI Experiment of the Hayabusa2 Mission: Insights from the Existence of Boulders Perched on Other Boulders	March 15, 2021	11:11 am	CDT	Track 5	Gaku Nishiyama
	4	Mound Craters on Rubble-Pile Bennu Indicate Strength at Depth	March 15, 2021	11:14 am	CDT	Track 5	Terik Daly
	5	Reaction of Dimorphos' Structure to the DART Impact	March 15, 2021	11:17 am	CDT	Track 5	Paula Benavidez
	6	Dynamics of Ejecta in the Didymos-Dimorphos Binary: Sensitivity to the System Parameters	March 15, 2021	11:20 am	CDT	Track 5	Alessandro Rossi
	7	Insight into the Distribution of High Pressure Shock Metamorphism in Rubble-Pile Asteroids	March 15, 2021	11:23 am	CDT	Track 5	Nicole Gueldemeister
	8	Experimental Constraints on the Ordinary Chondrite Shock Darkening Caused by Asteroid Collisions	March 15, 2021	11:26 am	CDT	Track 5	Tomas Kohout
Break				12:00-12:30 pm	CDT		
Masursky Lecture (Live Presentation)	1	The Early Aqueous Environment of Mars Inferred from Mission Lifetime Results by the Curiosity Rover at Gale Crater	March 15, 2021	12:30 pm	CDT	Plenary	John Grotzinger
Break				1:30-2:30 pm	CDT		
Physicochemical Evolution of the Moon	1	Early Dynamical Evolution of the Moon with a Subsurface Magma Ocean	March 15, 2021	2:35 pm	CDT	Track 1	Brynna Downey
	2	Crystallisation of a Model Silicate Moon	March 15, 2021	2:38 pm	CDT	Track 1	Edward Baker
	3	Determination of the Bulk Silicate Moon FeO Content from Petrological and Geophysical Models	March 15, 2021	2:41 pm	CDT	Track 1	Sabrina Schwinger

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	4	Petrogenesis of and Subsolidus Reequilibration Within Lunar Ferroan Anorthosites: Two Demonstrations of a New fO2-Dependent Model for Plagioclase-Melt Europium Partitioning	March 15, 2021	2:44 pm	CDT	Track 1	Nicholas Dygert
	5	Ancient Igneous Differentiation Trends in the Moon's Crust Can Be Produced by Secondary Magmatism from a Common Source	March 15, 2021	2:47 pm	CDT	Track 1	Stephen Elardo
	6	Source Regions of the Lunar Ultramafic Glasses Constrained by Experiments and Models	March 15, 2021	2:50 pm	CDT	Track 1	Stephanie Krein
	7	Characterization, Modeling, and Experimental Petrology of Picritic Green Glass in Northwest Africa 12384: Probing the Lunar Mantle	March 15, 2021	2:53 pm	CDT	Track 1	Christopher Yen
	8	The Influence of Variable Oxygen Fugacity on the Source Depths for Lunar High-Titanium Ultramafic Glasses	March 15, 2021	2:56 pm	CDT	Track 1	Megan Guenther
Shaken and Stirred: Interiors of Satellites and Ocean Worlds	1	Searching for Subsurface Oceans on the Moons of Uranus Using Magnetic Induction	March 15, 2021	2:35 pm	CDT	Track 2	Benjamin Weiss
	2	Antipodal Terrains Produced by Sputnik Planitia-Forming Impact Imply Pluto Has a Thick Ocean and Hydrated Core	March 15, 2021	2:38 pm	CDT	Track 2	Camille Denton
	3	Insights Into Io's Interior as Inferred from Its Long-Wavelength Topography	March 15, 2021	2:41 pm	CDT	Track 2	Szilárd Gyalay
	4	Long Period Non-Synchronous Rotation of Io	March 15, 2021	2:44 pm	CDT	Track 2	Jacob Abrahams
	5	Inferring Io’s Interior from Tidal Monitoring	March 15, 2021	2:47 pm	CDT	Track 2	Mathilde Kervazo
	6	Tidally-Induced Magmatic Pulses on the Oceanic Floor of Jupiter's Moon Europa	March 15, 2021	2:50 pm	CDT	Track 2	Marie Behounkova
	7	Revealing the Internal Structure of Europa with a Bayesian Approach to Magnetic Induction Studies	March 15, 2021	2:53 pm	CDT	Track 2	John Biersteker
	8	How Do Convective and Tidal Dynamics Interact in Europa's Subsurface Ocean?	March 15, 2021	2:56 pm	CDT	Track 2	Hamish Hay
Protoplanetary Disk Evolution	1	Dynamic Evolution of Major Element Chemistry in Protoplanetary Disks	March 15, 2021	2:35 pm	CDT	Track 3	Yoshinori Miyazaki
	2	Depletion of Moderately Volatile Elements by Open-System Loss in Early Solar Nebula	March 15, 2021	2:38 pm	CDT	Track 3	Debanjan Sengupta
	3	Photochemical Processing by Nearby Stars Recorded in Sulfur Isotopes of Cosmic Symplectite	March 15, 2021	2:41 pm	CDT	Track 3	Lionel Vacher

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	4	Chemical Processing of Solids Encountering Forming Giant Planet Cores	March 15, 2021	2:44 pm	CDT	Track 3	Megan Barnett
	5	Evidence for Non-steady Accretion in the Solar Nebula Inferred from Paleomagnetism of CO Chondrules	March 15, 2021	2:47 pm	CDT	Track 3	Caue Borlina
	6	The Fine-Scale Magnetic History of the Allende Meteorite: Implications for the Structure of the SolarNebula	March 15, 2021	2:50 pm	CDT	Track 3	Roger Fu
	7	Observations of Carbon Monoxide Variability in Massive Young Stellar Environments and Implications for Nebular Reservoirs	March 15, 2021	2:53 pm	CDT	Track 3	Rachel Smith
	8	Collision Fragments as a Chemically Similar Source for Late Accretion	March 15, 2021	2:56 pm	CDT	Track 3	Philip Carter
MSL Curiosity Results II: Exploration of the Greenheugh Pediment, Sulfate Unit, and Beyond	1	Reconstruction of Aeolian Palaeoenvironments and Past Climate Events at the Greenheugh Pediment, Aeolis Mons, Mars	March 15, 2021	2:35 pm	CDT	Track 4	Steven Banham
	2	APXS-Derived Compositions of Greenheugh Pediment Capping Rock and Immediately Underlying Murray Formation: Implications	March 15, 2021	2:38 pm	CDT	Track 4	Lucy Thompson
	3	Identifying Ancient Dune Processes in the Stimson Formation of Gale Crater Using Geochemical Data from ChemCam: New Insights from the Greenheugh Capping Unit	March 15, 2021	2:41 pm	CDT	Track 4	Candice Bedford
	4	Investigation of the Glen Torridon Clay-Bearing Unit and Overlying Greenheugh Pediment by the Sample Analysis at Mars Instrument Suite	March 15, 2021	2:44 pm	CDT	Track 4	Amy McAdam
	5	Factors Influencing the Formation and Preservation of X-Ray Amorphous Materials Identified in Sedimentary Deposits at Gale Crater, Mars	March 15, 2021	2:47 pm	CDT	Track 4	Cherie Achilles
	6	First Insight on Depositional Environments Recorded in the "Clay-Sulfate" Transition at Gale Crater	March 15, 2021	2:50 pm	CDT	Track 4	William Rapin
	7	Gale Crater: Curiosity Rover and the Candidate Basal Sulfate Unit	March 15, 2021	2:53 pm	CDT	Track 4	Raymond Arvidson
	8	Observations of the Marker Bed at Gale Crater with Recommendations for Future Exploration by the Curiosity Rover	March 15, 2021	2:56 pm	CDT	Track 4	Catherine Weitz

Session Title		Presentation Title	Date	Start Time	Time Zone	Track	Speaker Name
Impacts: Crater Formation Small to Large	1	Impacts into a Strength-Layered Target: The Time Evolution of the Excavation-Stage Flow	March 15, 2021	2:35 pm	CDT	Track 5	Jennifer Anderson
	2	Experimentally Isolating the Effects of Density and Porosity on Impact Craters	March 15, 2021	2:38 pm	CDT	Track 5	Christopher Cline II
	3	Influence of Target Heterogeneity on Crater Formation: Insight from Laboratory and Numerical Studies	March 15, 2021	2:41 pm	CDT	Track 5	Jens Ormö
	4	Numerical and Experimental Analysis of Wetumpka Impact Crater, with Focus on the Southern Rim	March 15, 2021	2:44 pm	CDT	Track 5	Leticia De Marchi
	5	A Hybrid SPH-SSDEM Framework for End-to-End Impact Cratering Modeling	March 15, 2021	2:47 pm	CDT	Track 5	Yun Zhang
	6	Global Scale Deformations Caused by the DART Impact: Insights to the Collisional Evolution of Small Asteroids	March 15, 2021	2:50 pm	CDT	Track 5	Sabina Raducan
	7	Complex Crater Formation by Oblique Impacts on the Earth and Moon	March 15, 2021	2:53 pm	CDT	Track 5	Thomas Davison
	8	Crustal Annulus of Impact Basins Controlled by Regional Thermal State of the Moon	March 15, 2021	2:56 pm	CDT	Track 5	Min Ding
Break				3:30-4:00 pm	CDT		
Lunar Space Weathering: Spectral Studies and Experiments	1	The Spectral Properties of Lunar Agglutinates	March 15, 2021	4:05 pm	CDT	Track 1	Brett Denevi
	2	Ultraviolet Characterization of Fe-impregnated Silica Gels as Analogs for Lunar Space Weathering	March 15, 2021	4:08 pm	CDT	Track 1	Karen Stockstill-Cahill
	3	Laser Experimental Modeling of the Formation of Nanophase Iron (np-Fe0)	March 15, 2021	4:11 pm	CDT	Track 1	Egor Sorokin
	4	Impact Production of Silicon-Bearing Iron-Nickel Metal: A Widely Occurring Process on the Moon?	March 15, 2021	4:14 pm	CDT	Track 1	Nicole Lunning
	5	Detection of Volatiles in Space Weathered Surfaces	March 15, 2021	4:17 pm	CDT	Track 1	Hope Ishii
	6	XANES and EELS Identification of Fe-Redox Variation in Space Weathered Apollo 17 Lunar Surface Soil	March 15, 2021	4:20 pm	CDT	Track 1	Leon Hicks
	7	Reevaluating How Charged Particles Cause Space Weathering on the Moon	March 15, 2021	4:23 pm	CDT	Track 1	Andrew Jordan

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	8	Dielectric Breakdown Weathering: Morphological Effects of Electrical Breakdown in Laboratory-Irradiated San Carlos Olivine	March 15, 2021	4:26 pm	CDT	Track 1	Morgan Shusterman
Crack, Boom! Active and Eruptive Satellites and Ocean Worlds	1	Cryovolcanically Sourced Methane on Charon	March 15, 2021	4:05 pm	CDT	Track 2	Stephanie Menten
	2	Active Volcanoes on Io: Results of Ground-Based Observations from IRTF 2017-2020	March 15, 2021	4:08 pm	CDT	Track 2	Julie Rathbun
	3	An Extensionally Fractured Upper Lithosphere on Io	March 15, 2021	4:11 pm	CDT	Track 2	Paul Byrne
	4	Chaos Terrains on Pluto, Europa, and Mars: Insights to Crustal Lithology and Structure	March 15, 2021	4:14 pm	CDT	Track 2	Helle Skjetne
	5	Bringing Order to Chaos: Insights on the Formation of Chaos Terrain from Geologic Mapping of Europa at the Regional Scale	March 15, 2021	4:17 pm	CDT	Track 2	Erin Leonard
	6	Fomenting Chaos: Formation on Europa Through Dry Porous Compaction	March 15, 2021	4:20 pm	CDT	Track 2	Samuel Howell
	7	Explosive Gas Emission Craters on Earth: Possible Analog for Raised Rim Lakes on Titan	March 15, 2021	4:23 pm	CDT	Track 2	Lauren Schurmeier
	8	Variations in the Near-Infrared Spectra of the Enceladus Plume	March 15, 2021	4:26 pm	CDT	Track 2	Himanshi Sharma
Evolution of Parent Bodies: Accretion, Differentiation, Crystallization, and Bombardment	1	Accretion and Thermal Evolution of IIAB and IIIAB Iron Meteorite Parent Bodies Inferred from Mn-Cr Chronometry	March 15, 2021	4:05 pm	CDT	Track 3	Aryavart Anand
	2	The Thermal Evolution of Planetesimals during Accretion and Differentiation: Consequences for Dynamo Generation by Thermally-Driven Convection	March 15, 2021	4:08 pm	CDT	Track 3	Kathryn Dodds
	3	New Insights to the Genetics, Formation, and Crystallization History of Group IC Iron Meteorites	March 15, 2021	4:11 pm	CDT	Track 3	Hope Tornabene
	4	Mineralogy and Cooling History of Ungrouped Achondrite Erg Chech 002	March 15, 2021	4:14 pm	CDT	Track 3	Takashi Mikouchi
	5	Stratigraphic Comparison Between Quenched Angrites and Komatiites	March 15, 2021	4:17 pm	CDT	Track 3	Hideyuki Hayashi
	6	Further Insights of Temperature-Time Events on HED Parent Body Using U-Th-Pb Chronology of Zircon-Bearing Noritic Diogenite Northwest Africa 10666	March 15, 2021	4:20 pm	CDT	Track 3	Minako Righter

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	7	Insights from Siderophile Elements into the Impact Origin of Mesosiderites	March 15, 2021	4:23 pm	CDT	Track 3	Jasmeet Dhaliwal
	8	Accessory Mineral Chronology of Eucrites Reveals New Insights into the Formation, Evolution, and Bombardment of Vesta	March 15, 2021	4:26 pm	CDT	Track 3	Lee White
Martian Fluids and Element Mobility	1	Modeling the Behavior of Selected Water-Soluble Elements in Calcium Sulfate Veins of Gale Crater	March 15, 2021	4:05 pm	CDT	Track 4	Debarati Das
	2	Boron Adsorption onto Clay Minerals: Insight into Martian Groundwater Geochemistry	March 15, 2021	4:08 pm	CDT	Track 4	Matthew Nellessen
	3	Elevated Fluorine Abundances Below the Siccar Point Unconformity: Implications for Fluid Circulation in Gale Crater	March 15, 2021	4:11 pm	CDT	Track 4	Olivier Forni
	4	Chemistry of Manganese-Bearing Materials at the Groken Drill Site, Gale Crater, Mars	March 15, 2021	4:14 pm	CDT	Track 4	Nina Lanza
	5	Possible Detection of a Jahnsite-Whiteite Group Phosphate Mineral by MSL CheMin in Glen Torridon, Gale Crater, Mars	March 15, 2021	4:17 pm	CDT	Track 4	Allan Treiman
	6	X-Ray Amorphous Sulfates in Gale Crater, Mars	March 15, 2021	4:20 pm	CDT	Track 4	Rebecca Smith
	7	Constraining the Surface Weathering Formation Conditions of the Olivine-Carbonate Unit in the Northeast Syrtis Region Using Reactive Transport Modelling	March 15, 2021	4:23 pm	CDT	Track 4	Sierra Kaufman
	8	A Possible Formation Pathway for Zeolites in Closed-Basin Lakes on Noachian Mars: Insights from Geochemical Modeling	March 15, 2021	4:26 pm	CDT	Track 4	Gayantha Loku Kodikara
Impacts: Changing Planetary Bodies	1	Effects of Atmosphere on Ejecta Emplacement on Earth and Mars	March 15, 2021	4:05 pm	CDT	Track 5	Michael Carlson
	2	A Numerical Model to Constrain the Origin of Lunar Impact Ejecta	March 15, 2021	4:08 pm	CDT	Track 5	Soren Helhoski
	3	Solid Fragments Ejected by Lunar Hypervelocity Impacts	March 15, 2021	4:11 pm	CDT	Track 5	Sean Wiggins
	4	Modeling the Accumulation of Secondary Craters on Mars and the Moon	March 15, 2021	4:14 pm	CDT	Track 5	Tyler Powell
	5	Thermal Consequences of Impact Bombardments to the Silicate Crusts of Terrestrial-Type Exoplanets	March 15, 2021	4:17 pm	CDT	Track 5	Oleg Abramov
	6	Seismic Source Time Function and Frequency Content of Impact-Generated Seismic Waves	March 15, 2021	4:20 pm	CDT	Track 5	Natalia Wójcicka

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	7	Twinned Magnetite in Granitic Samples from the Siljan Impact Structure, Sweden	March 15, 2021	4:23 pm	CDT	Track 5	Sanna Alwmark
	8	Identifying the Sweet Spot for an Impact-Induced Martian Dichotomy	March 15, 2021	4:26 pm	CDT	Track 5	Harry Ballantyne
Tuesday, March 16, 2021							
Special Session: Mars 2020 I (Live Presentations)	1	The Mars 2020 Mission One Month After Landing	March 16, 2021	11:00 am	CDT	Plenary	Kenneth Farley
	2	A Tour of Ancient Habitable Environments In and Around Jezero Crater, Mars	March 16, 2021	11:15 am	CDT	Plenary	Kenneth Williford
	3	Sampling Mars: Notional Caches from Mars 2020 Strategic Planning	March 16, 2021	11:30 am	CDT	Plenary	Christopher Herd
	4	Mineralogy from Mars-2020: Updates to the Regional Geologic History of Jezero Crater, Its Watershed, and a Framework for Perseverance Exploration	March 16, 2021	11:45 am	CDT	Plenary	Bethany Ehlmann
Break				12:00-12:30 pm	CDT		
Special Session: Mars 2020 II (Live Presentations)	1	Initial Results from the Mars 2020 ECAM Imaging System	March 16, 2021	12:30 pm	CDT	Plenary	Justin Maki
	2	Anticipated Initial Results from the NASA Mars 2020 Perseverance Rover Mastcam-Z Multispectral, Stereoscopic Imaging Investigation	March 16, 2021	12:45 pm	CDT	Plenary	James Bell III
	3	SuperCam on the Perseverance Rover for Exploration of Jezero Crater: Remote LIBS, VISIR, Raman, and Time-Resolved Luminescence Spectroscopies Plus Micro-Imaging and Acoustics	March 16, 2021	1:00 pm	CDT	Plenary	Roger Wiens
	4	First Observations with MEDA: The Environmental and Meteorological Package for Mars 2020	March 16, 2021	1:15 pm	CDT	Plenary	Jose Rodriguez-Manfredi
Break				1:30-2:30 pm	CDT		
Special Session: Mars 2020 III (Live Presentations)	1	RIMFAX GPR on the MARS 2020 Investigation at Jezero Crater	March 16, 2021	2:30 pm	CDT	Track 1	Svein-Erik Hamran
	2	The Scanning Habitable Environments with Raman and Luminescence for Organics and Chemicals Instrument on the Mars 2020 Perseverance Rover	March 16, 2021	2:45 pm	CDT	Track 1	Rohit Bhartia

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	3	The Mars 2020 WATSON Imaging Subsystem of the SHERLOC Investigation and Anticipated Early Results	March 16, 2021	3:00 pm	CDT	Track 1	Michelle Minitti
	4	The PIXL Instrument on the Mars 2020 Perseverance Rover	March 16, 2021	3:15 pm	CDT	Track 1	Joel Hurowitz
Endogenous Lunar Volatiles Through Time and Space	1	Tidal Pull of the Earth Strips the Proto-Moon of Its Volatiles	March 16, 2021	2:35 pm	CDT	Track 2	Sebastien Charnoz
	2	The Importance of Hydrogen Partitioning During Lunar Magma Ocean Crystallization: Implications for Constraining the Water Content of the Bulk Silicate Moon	March 16, 2021	2:38 pm	CDT	Track 2	Ananya Mallik
	3	15597 Pigeonite Basalts: Evidence for a Wet Primitive Lunar Mantle	March 16, 2021	2:41 pm	CDT	Track 2	Xue Su
	4	Lunar Sample 15421,67: Enigmatic Magnesio-Hornblende Monocrystal Hosting Almandine, Omphacite, Quartz, Epidote, Osumilite-Mg, and Al2SiO5	March 16, 2021	2:44 pm	CDT	Track 2	Donald Barker
	5	Discovery of A Na-K-Sulfate on Apollo 74220 Orange Beads: Direct Evidence of Volcanic Outgassing of Na and K on the Moon	March 16, 2021	2:47 pm	CDT	Track 2	Yang Liu
	6	Magnitude of Stable Isotope Fractionation in Lunar Basalts	March 16, 2021	2:50 pm	CDT	Track 2	Youxue Zhang
	7	Polar Ice Accumulation on the Moon Due to Volcanically Induced Transient Atmospheres	March 16, 2021	2:53 pm	CDT	Track 2	Andrew Wilcoski
	8	The Role of the Transient Volcanically-Induced Lunar Atmosphere in Transport and Deposition of Polar Volatiles	March 16, 2021	2:56 pm	CDT	Track 2	Igor Aleinov
Calcium-Aluminum-Rich Inclusions in Meteorites	1	Radial Distribution of CAIs	March 16, 2021	2:35 pm	CDT	Track 3	Steven Desch
	2	Oxygen Isotope Reservoirs in the Solar Nebula	March 16, 2021	2:38 pm	CDT	Track 3	Prajkta Mane
	3	Evidence for the Survival of a P-Process Anomaly Carrier in Fine-Grained CAIs from Allende	March 16, 2021	2:41 pm	CDT	Track 3	François Tissot
	4	Initial 244Pu/238U Ratios and Search for Presolar SiC in CAIs Inferred from Noble Gas and Trace Element Abundances in CAIs from CV3 Chondrites	March 16, 2021	2:44 pm	CDT	Track 3	Daisuke Nakashima

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	5	Titanium Isotope Systematics of Refractory Inclusions: Echoes of Molecular Cloud Heterogeneity	March 16, 2021	2:47 pm	CDT	Track 3	Quinn Shollenberger
	6	Multiple Episodes of Superflares from Our Nascent Sun: Evidences from a Canonical CAI in Vigarano	March 16, 2021	2:50 pm	CDT	Track 3	Ritesh Mishra
	7	Experimental Determination of the 129I/127I Ratio in the Early Solar System	March 16, 2021	2:53 pm	CDT	Track 3	Olga Pravdivtseva
	8	Separate CAI Reservoirs for Allende (CV3) and Murchison (CM2)	March 16, 2021	2:56 pm	CDT	Track 3	Denton Ebel
Icy Satellites and Ocean Worlds: Geology and Geophysics	1	New Constraints on Pluto's Lithosphere from Tectonics, Cryovolcanism, and Sputnik Planitia Loading Models	March 16, 2021	2:35 pm	CDT	Track 4	Patrick McGovern
	2	Constraining the Compensation State, Structure, and Geophysical Evolution of Sputnik Basin on Pluto	March 16, 2021	2:38 pm	CDT	Track 4	Samantha Moruzzi
	3	The Enceladus's Ice Shell Geometry: How It Could Form and What It Tells Us	March 16, 2021	2:41 pm	CDT	Track 4	Wanying Kang
	4	Regional Photometric Study of Ganymede's Surface	March 16, 2021	2:44 pm	CDT	Track 4	Ines Belgacem
	5	Compositional Mapping of Europa and Ganymede with VLT/SPHERE and Galileo/NIMS Using Markov Chain Monte Carlo Fitting	March 16, 2021	2:47 pm	CDT	Track 4	Oliver King
	6	Regional Scale Tectonic Features at Argadnel Regio and Agenor Linea, Europa: Plate Tectonic Evidence or Global Tidal Forcing?	March 16, 2021	2:50 pm	CDT	Track 4	Charlene Detelich
	7	Effect of a Superficial Porous Brittle Layer on the Thermal Equilibrium of Europa's Ice Shell	March 16, 2021	2:53 pm	CDT	Track 4	Rawad Himo
	8	Modeling Fracture Hazards at Europa for Cryobot Tunneling and Communication	March 16, 2021	2:56 pm	CDT	Track 4	Rudi Lien
Great Balls of Fire: Explosive Volcanism Across the Solar System	1	Investigating the Unexpected Youth of Mercury's Pyroclastic Deposits	March 16, 2021	2:35 pm	CDT	Track 5	Lauren Jozwiak
	2	Global Analysis of Mercury's Pits Surroundings	March 16, 2021	2:38 pm	CDT	Track 5	Océane Barraud
	3	Spectral Analysis of Explosive and Effusive Volcanic Edifices in the Marius Hills Volcanic Complex with Moon Mineralogy Mapper	March 16, 2021	2:41 pm	CDT	Track 5	Marie Henderson
	4	Spectral Analysis of Lunar Pyroclastic Deposits in the Montes Apenninus Region	March 16, 2021	2:44 pm	CDT	Track 5	Lori Pigue

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	5	Dynamics of Dense Pyroclastic Flows on Venus — Insights into Pyroclastic Eruptions	March 16, 2021	2:47 pm	CDT	Track 5	Indujaa Ganesh
	6	Evidence for Supervolcanic Resurfacing in Arabia Terra, Mars	March 16, 2021	2:50 pm	CDT	Track 5	Augustus Bates
	7	Is Tridymite a Witness of Explosive Volcanism in Early Mars?	March 16, 2021	2:53 pm	CDT	Track 5	Valerie Payre
	8	Roles of Magmatic Volatile, Ground Ice, and Impact Triggering on the Dynamics of the Most Recent Explosive Volcanic Eruption on Mars	March 16, 2021	2:56 pm	CDT	Track 5	Pranabendu Moitra
Break				3:30-4:00 pm	CDT		
Special Session: Mars 2020 IV (Live Presentations)	1	Comparing the Jezero Floor Unit and the Circum-Isidis Mafic Cap: Morphology, Stratigraphy, and Composition	March 16, 2021	4:00 pm	CDT	Track 1	Carol Hundal
	2	The Complex Exhumation History of Jezero Crater Floor Unit	March 16, 2021	4:15 pm	CDT	Track 1	Cathy Quantin-Nataf
	3	Origins of Carbonate-Bearing Rocks in Jezero Crater	March 16, 2021	4:30 pm	CDT	Track 1	Jesse Tarnas
	4	Characterizing the Stratigraphy of the Nili Planum Region Outside Jezero Crater: Implications for Mars 2020 Strategic Planning	March 16, 2021	4:45 pm	CDT	Track 1	Justin Simon
Lunar Volatiles Through Remote Sensing, Modeling and Experiments	1	Understanding the Contemporary Lunar Volatile System as a Key to the Past	March 16, 2021	4:05 pm	CDT	Track 2	Paul Lucey
	2	Telescopic Hydration Observations of Change'e 5 Landing Site in Partial Eclipse	March 16, 2021	4:08 pm	CDT	Track 2	Abigail Flom
	3	Enhanced Hydration at Craters with Central Peaks Detected by Ground-Based Observations	March 16, 2021	4:11 pm	CDT	Track 2	Casey Honniball
	4	Water Anomalies at Rugged Lava Flows on the Moon	March 16, 2021	4:14 pm	CDT	Track 2	Shuai Li
	5	One of These Poles is Not Like the Other: Asymmetry in the Global Distribution of Lunar CPR Anomalous Craters	March 16, 2021	4:17 pm	CDT	Track 2	Bradley Thomson
	6	Evaluating Water Adsorption Through Remotely Acquired Spectra of the Lunar Surface	March 16, 2021	4:20 pm	CDT	Track 2	Elizabeth Fisher
	7	Diurnal Storage and Release of Lunar Subsurface Water in the Clavius Region	March 16, 2021	4:23 pm	CDT	Track 2	Philipp Reiss
	8	Negative Secondary Ion Sputtering by Solar Wind Energy Ions on Lunar Samples	March 16, 2021	4:26 pm	CDT	Track 2	John Keller

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
Chondrules: The Continuing Conundrum	1	High Precision Al-Mg Chronology of Chondrules in Unequilibrated Ordinary Chondrites	March 16, 2021	4:05 pm	CDT	Track 3	Noriko Kita
	2	Multiple CV Chondrule Precursors Originating from the Inner and Outer Solar System: Evidence from Cr-Ti-O Isotope Systematics of Allende Chondrules	March 16, 2021	4:08 pm	CDT	Track 3	Kohei Fukuda
	3	Producing Chondrules in the Outer Solar System: The Effect of Ice on Impact Jetting	March 16, 2021	4:11 pm	CDT	Track 3	Melissa Cashion
	4	New Constraints on Chondrule Formation from Experimental Reproduction of Aluminum and Titanium Zoning in Chondrule Olivine	March 16, 2021	4:14 pm	CDT	Track 3	James Greenwood
	5	K Isotope Systematics of the CB Chondrite Gujba: Testing the Impact Plume Model of Formation	March 16, 2021	4:17 pm	CDT	Track 3	Piers Koefoed
	6	Geochemical Constraints on Potential UOC Chondrule Genesis by Hypervelocity Impact Vapor Plumes and Likely Precursor Sources	March 16, 2021	4:20 pm	CDT	Track 3	Daniel Sheikh
	7	Hydrogen Content in Chondrules of CM Chondrites: Influence of Aqueous Alteration or Preaccretional Heritage?	March 16, 2021	4:23 pm	CDT	Track 3	Samantha Azevedo-Vannson
	8	Early Accretion of Chondrule Dust Rims	March 16, 2021	4:26 pm	CDT	Track 3	Augusto Carballido
Icy and Ocean Worlds: Compositional Evolution and State	1	Water Activity of Europa's Ocean: Temporal Variability and Implications	March 16, 2021	4:05 pm	CDT	Track 4	Elizabeth Spiers
	2	Brine Evolution and Transport-Driven Fractionation of Ocean Fluids Within Europa's Icy Shell	March 16, 2021	4:08 pm	CDT	Track 4	Mark Fox-Powell
	3	VIS-NIR Spectral Study of Salty Ice Analogue Samples with Implications for Icy Moons	March 16, 2021	4:11 pm	CDT	Track 4	Romain Cerubini
	4	Rocky Core Meets Fluids — Modeling Metamorphic Phases on Icy Moons	March 16, 2021	4:14 pm	CDT	Track 4	Julia Semprich
	5	Elemental Constraints on Ceres' Hydrothermal Evolution: Regolith Models	March 16, 2021	4:17 pm	CDT	Track 4	Thomas Prettyman
	6	Modelling Water-Rock Interactions in the Subsurface Environment of Enceladus	March 16, 2021	4:20 pm	CDT	Track 4	Rachael Hamp
	7	The New Field of Titan Cryomineralogy: Six Confirmed Co-Crystals and Counting	March 16, 2021	4:23 pm	CDT	Track 4	Morgan Cable
	8	Outgassing Experiments on Carbonaceous Chondrites and Their Implications for Titan's Secondary Atmosphere	March 16, 2021	4:26 pm	CDT	Track 4	Taylor Duncan

Session Title		Presentation Title	Date	Start Time	Time Zone	Track	Speaker Name
Let It Flow: Lava Flow Dynamics and Emplacement Across the Solar System	1	Strong Variability in the Decameter-Scale Geometries of Lava Flow Margins	March 16, 2021	4:05 pm	CDT	Track 5	Ethan Schaefer
	2	Progress Toward a Porous Flow Model for the Emplacement of Pahoehoe Flow Fields	March 16, 2021	4:08 pm	CDT	Track 5	Laszlo Kestay
	3	A Rheological, Mathematical, and Statistical Comparison of Lunar Rilles and Terrestrial Lava Tubes	March 16, 2021	4:11 pm	CDT	Track 5	Sonit Sisolekar
	4	Lunar Volcanic Eruptions: Estimates of Magma Volatile Contents, Volumes, and Eruption Rates	March 16, 2021	4:14 pm	CDT	Track 5	Lionel Wilson
	5	Modelling Voluminous, Rapid Lava Flow Emplacement on Io to Constrain Lava Composition	March 16, 2021	4:17 pm	CDT	Track 5	Ashley Davies
	6	A Volume Flux Approach to Europa Cryolava Dome Formation and Implications for the Thermal Evolution of Crustal Fluid Reservoirs	March 16, 2021	4:20 pm	CDT	Track 5	Lynnae Quick
	7	Modeling Effusive Cryolava Flows: Reevaluating Flow Emplacement	March 16, 2021	4:23 pm	CDT	Track 5	Aaron Morrison
	8	Subsurface Sediment Mobilization on Mars: Compositional Analysis Using HiRISE Color Data	March 16, 2021	4:26 pm	CDT	Track 5	Angela Dapremont
Wednesday, March 17, 2021							
Lunar Science for the New Millennium (Live Presentations)	1	The Scientific Achievements by Chang'E-4 and the New Lunar Samples Returned by Chang'E-5	March 17, 2021	11:00 am	CDT	Plenary	Yangting Lin
	2	Revisiting Apollo and Preparing for Artemis: A Perspective from the ANGSA Initiative	March 17, 2021	11:20 am	CDT	Plenary	Charles Shearer
	3	The Artemis III Science Definition Team Report	March 17, 2021	11:40 am	CDT	Plenary	Renee Weber
Break				12:00-12:30 pm	CDT		
Special Session: Apollo Next Generation Sample Analysis I: Fulfilling Apollo Goals and Preparing for Artemis, New Results from Special Apollo Samples	1	The ANGSA Program: A Low-Cost Lunar "Sample Rreturn Mission." An Overview and Progress Over the Last 18 Months	March 17, 2021	12:35 pm	CDT	Track 1	Francis McCubbin
	2	Apollo 17 Deep Drill Core 70001/9: Large Impact Ages at Taurus-Littrow, Recorded Increase in Solar Luminance, and Implications for ANGSA Studies	March 17, 2021	12:38 pm	CDT	Track 1	Harrison Schmitt
	3	Compositional Variability and Basalt Stratigraphy of the Taurus-Littrow Valley Floor: Implications for Double Core Tube 73001/02	March 17, 2021	12:41 pm	CDT	Track 1	Noah Petro

Session Title		Presentation Title	Date	Start Time	Time Zone	Track	Speaker Name
	4	Preliminary Examination Process of Apollo Core 73002 — Insights and Lessons Learned from ANGSA for Future Sample Return Missions	March 17, 2021	12:44 pm	CDT	Track 1	Juliane Gross
	5	Using X-Ray Computed Tomography to Image Apollo Drive Tube 73002	March 17, 2021	12:47 pm	CDT	Track 1	Ryan Zeigler
	6	Development of a High Vacuum CSVC Penetration System for the Apollo Next-Generation Sample Analysis Programme	March 17, 2021	12:50 pm	CDT	Track 1	Aidan Cowley
	7	Multispectral Imaging and Hyperspectral Profile of the First Dissection of Core 73002	March 17, 2021	12:53 pm	CDT	Track 1	Lingzhi Sun
	8	Apollo 17 Drive Tube 73002 Major and Trace Element Characterization	March 17, 2021	12:56 pm	CDT	Track 1	Mason Neuman
Isotopic Reservoirs in the Early Solar System	1	Heterogeneous R-Process Chromium and Titanium Ejecta from Core Collapse Supernova Ejecta Polluted Our Solar System	March 17, 2021	12:35 pm	CDT	Track 2	Maitrayee Bose
	2	Isotopic Constraints on the Building Blocks of the Solar System	March 17, 2021	12:38 pm	CDT	Track 2	Katherine Bermingham
	3	Inheritance of Meteoritic Isotopic Anomalies from a Zoned Protosolar Cloud	March 17, 2021	12:41 pm	CDT	Track 2	Emmanuel Jacquet
	4	Nucleosynthetic Variations Generated by Size and Density Driven Sorting of Dust in Protoplanetary Disk	March 17, 2021	12:44 pm	CDT	Track 2	Jean-David Bodénan
	5	Constraints on Chondrule Generation, Disk Dynamics, and Asteroid Accretion from the Compositions of Carbonaceous Meteorites	March 17, 2021	12:47 pm	CDT	Track 2	James Bryson
	6	A Very Early Origin of Isotopically Distinct Nitrogen in Inner Solar System Protoplanets	March 17, 2021	12:50 pm	CDT	Track 2	Damanveer Grewal
	7	K Isotope Variations in Chondrules, CAIs. Matrix and Bulk Chondrites	March 17, 2021	12:53 pm	CDT	Track 2	Yaray Ku
	8	Stalking a Large Carbonaceous Chondrite Asteroid Using ε54Cr-Δ17O Isotope Systematics of the Unique Xenolith Almahata Sitta 202	March 17, 2021	12:56 pm	CDT	Track 2	Audrey Miller
Small Body Spectroscopy: Composition and Classification	1	VNIR Reflectance Spectroscopy of Five G-Class Asteroids: Implications for Mineralogy and Geologic Evolution	March 17, 2021	12:35 pm	CDT	Track 3	Justin Germann

Session Title		Presentation Title	Date	Start Time	Time Zone	Track	Speaker Name
	2	A Spectral Analysis of the Massalia Asteroid Family to Evaluate the L-Chondrite Source Hypothesis	March 17, 2021	12:38 pm	CDT	Track 3	Caleb Strom 5950874
	3	Hydrated Minerals on B-class Asteroids	March 17, 2021	12:41 pm	CDT	Track 3	Andrew Rivkin
	4	Main-Belt Infrared Spectral Analogues for (101955) Bennu: Gaussian Fitting to AKARI Spectra of Bennu-Like Asteroids	March 17, 2021	12:44 pm	CDT	Track 3	Lucy Lim
	5	Characterizing Spectral Diversity in Carbonaceous Chondrites and Linking Meteorites to Asteroids with Microimaging Spectroscopy	March 17, 2021	12:47 pm	CDT	Track 3	Sergio Parra
	6	Meteorite Controlled Ablation Under Low Vacuum Studied Using Emission Spectroscopy: A Technique to Sample the Bulk Composition of Asteroids	March 17, 2021	12:50 pm	CDT	Track 3	Josep Trigo-Rodriguez
	7	Utility of Generative Approaches for Meteorite and Asteroid Classification	March 17, 2021	12:53 pm	CDT	Track 3	Sydney Wallace
	8	An Integrated Fine and Coarse Particulate Machine Learning MIR Model Predicts Modal Mineralogy of CI/CM Chondritic Asteroids and Bennu	March 17, 2021	12:56 pm	CDT	Track 3	Laura Breitenfeld
Martian Hydrated Minerals and Aqueous Alteration	1	Unique Basin-Related Alteration on Early Mars	March 17, 2021	12:35 pm	CDT	Track 4	Christina Viviano
	2	Mineralogy, Aqueous Alteration, and Biosignature Preservation Potential of Bedrock Deposits at Oxia Planum, ExoMars 2022 Landing Sites, as Inferred from Spectral Study of Terrestrial Analogues	March 17, 2021	12:38 pm	CDT	Track 4	Agata Krzesinska
	3	Near-Infrared Signature of Kaolinite: A Proxy for Estimating Its Crystallinity and Its Geological Origin on Earth and Mars	March 17, 2021	12:41 pm	CDT	Track 4	Maxime Pineau
	4	Presence of Clay Minerals Can Obscure Spectral Evidence of Mg Sulfates: Implications for Orbital Observations of Mars	March 17, 2021	12:44 pm	CDT	Track 4	Rachel Sheppard
	5	Correlating Sulfates with the Aqueous Geochemical History at Juventae Chasma, Mars	March 17, 2021	12:47 pm	CDT	Track 4	Janice Bishop
	6	VNIR and Raman Spectral Characterization of Martian Analogue Chloride and Sulfate Brines	March 17, 2021	12:50 pm	CDT	Track 4	Emily Hughes

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	7	Fe Mineralogy Controls on Generation Ratio of Chlorate/Perchlorate on the Martian Surface	March 17, 2021	12:53 pm	CDT	Track 4	Shuai-yi Qu
Exoplanets: Composition and Structure	1	Assessing the Abundance of Super-Mercuries and Their Habitability	March 17, 2021	12:35 pm	CDT	Track 5	Stephen Parman
	2	Differentiating Exo-Venus and Exo-Earth Using Transmission Spectroscopy	March 17, 2021	12:38 pm	CDT	Track 5	Colby Ostberg
	3	To See a World in a Shard of Ice: 'Oumuamua as a Fragment of N2 Ice from an Exo-Pluto	March 17, 2021	12:41 pm	CDT	Track 5	Alan Jackson
	4	Petrological Experiments on Rocky Exoplanet Compositions Reveal Clues to Habitability	March 17, 2021	12:44 pm	CDT	Track 5	Karalee Brugman
	5	The Compositional Range of Terrestrial Exoplanets in the Solar Neighborhood	March 17, 2021	12:47 pm	CDT	Track 5	Rob Spaargaren
	6	Energetic Requirements for Dynamos in the Metallic Cores of Super-Earth and Super-Venus Exoplanets	March 17, 2021	12:50 pm	CDT	Track 5	Claire Blaske
	7	Characterizing Exoplanet Transits and Stellar Activity in Kepler Lightcurves with Scalable Gaussian Processes	March 17, 2021	12:53 pm	CDT	Track 5	Victoria Foing
	8	Towards Deep Learning for Transiting Exoplanet Search Using Simulated TESS Data	March 17, 2021	12:56 pm	CDT	Track 5	Yke Rusticus
Break				1:30-2:30 pm	CDT		
Special Session: Apollo Next Generation Sample Analysis II: Fulfilling Apollo Goals and Preparing for Artemis, New Results from Special Apollo Samples	1	Nanoscale Insights into Apollo 17 Regolith Samples from Stations 2 and 6: Exposure History, Mineral Phase Composition, and Space Weathering	March 17, 2021	2:35 pm	CDT	Track 1	Brittany Cymes
	2	Exploring the South Massif of the Taurus-Littrow Valley (TLV) by Examining the Less Than 2mm Lithic Fragments in the 73001/73002 Double Drive Tube	March 17, 2021	2:38 pm	CDT	Track 1	Steven Simon
	3	Lithology of Rock Fragments in Apollo 17 Double Drive Tube Core 73002 Using X-Ray Computed Tomography and Comparison to Lithologic Makeup of Station 3 Soils	March 17, 2021	2:41 pm	CDT	Track 1	Bradley Jolliff
	4	Crystal Size Distributions of Ilmenite in Basalt Clasts from Apollo 17 Drive Tube 73002	March 17, 2021	2:44 pm	CDT	Track 1	Jessika Valenciano

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	5	Investigating the Magmatic History of Volatiles in Apollo 17 Basalts, Apollo Next Generation Sample Analysis	March 17, 2021	2:47 pm	CDT	Track 1	Zoe Wilbur
	6	Mapping Hydrogen Variations in Silicate Glasses: Eruptive Lunar Degassing	March 17, 2021	2:50 pm	CDT	Track 1	Erin Recchuiti
	7	The Oxidation State of Sulfur in Apollo Samples 71035 and 71055	March 17, 2021	2:53 pm	CDT	Track 1	Maryjo Brounce
	8	Natural Thermoluminescence of Lunar Samples: Review and Update	March 17, 2021	2:56 pm	CDT	Track 1	Alexander Sehlke
Big Bodies: Modeling and Measurements of Planetesimals	1	New Findings from Simulations of the History of Main Belt Asteroids	March 17, 2021	2:35 pm	CDT	Track 2	Keith Holsapple
	2	Large Low-Albedo Asteroids: Thermal and Dynamical Context	March 17, 2021	2:38 pm	CDT	Track 2	Driss Takir
	3	DAWN-VIR at Vesta and Ceres: A New Look in the Visible Through Global Maps of Spectral Parameters	March 17, 2021	2:41 pm	CDT	Track 2	Batiste Rousseau
	4	Testing the Hypothesis that Curvilinear Gullies, Lobate Deposits, and Pitted Terrain on Vesta and Ceres Were Formed by Short-Lived, Debris-Flow-Like Processes	March 17, 2021	2:44 pm	CDT	Track 2	Jennifer Scully
	5	The Evolving Crust of 4 Vesta from Compositional and Thermal Modelling	March 17, 2021	2:47 pm	CDT	Track 2	Jennifer Mitchell
	6	Age Relationships of Large-Scale Troughs and Impact Basins on Vesta	March 17, 2021	2:50 pm	CDT	Track 2	Hiu Ching Jupiter Cheng
	7	Magnetization of Large C-Type Asteroids: A Detectable Consequence of Pebble Accretion?	March 17, 2021	2:53 pm	CDT	Track 2	Samuel Courville
	8	Spectroscopic Survey of the Inner Belt Primitive Background Population	March 17, 2021	2:56 pm	CDT	Track 2	Anicia Arredondo
Mercury: Big Science in a Small Planet	1	Small, Dense, and Isolated: Growing Better Mercury Analogs with In-Situ Accretion and Cataclysmic Instabilities	March 17, 2021	2:35 pm	CDT	Track 3	Matthew Clement
	2	Thermal Evolution of Mercury with a Volcanic Heat Pipe Flux	March 17, 2021	2:38 pm	CDT	Track 3	Georgia Peterson
	3	Carbon Solubility in Mercurian Magmas: What We Don't Know	March 17, 2021	2:41 pm	CDT	Track 3	Kayla Iacovino
	4	Where Have All the Rings Gone? Exploring the Reputed Multiring Nature of Mercury's Caloris Basin	March 17, 2021	2:44 pm	CDT	Track 3	Gregory Gosselin

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	5	Spectral Analysis of Distinct Geological Units on Mercury	March 17, 2021	2:47 pm	CDT	Track 3	Rachel Gray
	6	Surface Mineralogy of Major Geochemical Terranes of Mercury: Results from NIR (0.7-4.2 microns) Ground Based IRTF/SpeX Spectroscopy	March 17, 2021	2:50 pm	CDT	Track 3	Indhu Varatharajan
	7	A Multi-Wavelength Study of Mercury's Polar Anomalies: New Data from Arecibo Informed by MESSENGER	March 17, 2021	2:53 pm	CDT	Track 3	Heather Meyer
	8	Understanding the Space Weathering of Mercury Through Laboratory Experiments	March 17, 2021	2:56 pm	CDT	Track 3	Michelle Thompson
Martian Mineralogy from Orbit	1	A Tour of Carbonate Lithologies in Huygens Basin, Mars	March 17, 2021	2:35 pm	CDT	Track 4	Allison Zastrow
	2	Geological Investigation of Northern Rim of Argyre Planitia, Mars Using High Resolution Datasets	March 17, 2021	2:38 pm	CDT	Track 4	Mamta Chauhan
	3	Identifying Two Distinct Olivine Compositions in Tyrrhena Terra and Libya Montes, Mars	March 17, 2021	2:41 pm	CDT	Track 4	Melissa Lane
	4	The Mineralogy of Lithic Sediments Within the South Polar Layered Deposits of Mars	March 17, 2021	2:44 pm	CDT	Track 4	Prakhar Sinha
	5	CRISM-Derived Modal Mineralogy and Thermal Inertia for Oxia Planum	March 17, 2021	2:47 pm	CDT	Track 4	Thomas Condus
	6	Compositional Analysis of Martian Regolith and Surface Deposits Using THEMIS Repeat Imaging Over the Diurnal Cycle	March 17, 2021	2:50 pm	CDT	Track 4	Justin Cowart
	7	Synthesis of Chemical Provinces on Mars and Their Geologic Interpretations	March 17, 2021	2:53 pm	CDT	Track 4	Alka Rani
	8	Hydrated Silica Associated with Glacier-Like Forms on Mars	March 17, 2021	2:56 pm	CDT	Track 4	Noel Scudder
Atmospheres: Dynamics, Evolution, and Composition	1	Leveraging Meteorite Outgassing Experiments to Improve Models of the Initial Atmospheres of Terrestrial Exoplanets	March 17, 2021	2:35 pm	CDT	Track 5	Maggie Thompson
	2	Sustaining Mars Surface Habitability: Climate and Climate Evolution	March 17, 2021	2:38 pm	CDT	Track 5	Edwin Kite
	3	Abiotic Input of Fixed Nitrogen by Bolide Impacts in CH4+CO2+N2 and H2+CH4+CO2+N2 Atmospheres. Comparison with Nitrate Levels Measured by the Curiosity Rover's Sample Analysis at Mars Instrument	March 17, 2021	2:41 pm	CDT	Track 5	Rafael Navarro-Gonzalez

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	4	Diurnal Variations in Atmospheric Opacity at Gale Crater, Mars	March 17, 2021	2:44 pm	CDT	Track 5	Alvaro Vicente-Retortillo
	5	Global Dust Redistribution on Mars: Insights from Observed Surface Temperatures	March 17, 2021	2:47 pm	CDT	Track 5	Jonathan Bapst
	6	Emirates Mars Mission (EMM) 2020 Overview and Status	March 17, 2021	2:50 pm	CDT	Track 5	Hessa Almatroushi
	7	The Effect of Diffusion on Oxygen Isotopes in the Upper Atmosphere of Mars	March 17, 2021	2:53 pm	CDT	Track 5	Marah Brinjikji
	8	Stratospheric Haze Bands Observed in Cassini VIMS	March 17, 2021	2:56 pm	CDT	Track 5	Nicholas Kutsop
Break				3:30-4:00 pm	CDT		
New Understanding of Mars and Asteroids (Live Presentations)	1	Results from InSight's First Full Martian Year	March 17, 2021	4:00 pm	CDT	Plenary	Mark Panning
	2	The OSIRIS-REx Touch-and-Go Sample Acquisition Event and Implications for the Nature of the Returned Sample	March 17, 2021	4:15 pm	CDT	Plenary	Dante Lauretta
	3	Hayabusa2 Reentry Capsule Retrieval and Sample Container Opening Operations	March 17, 2021	4:30 pm	CDT	Plenary	Shogo Tachibana
Thursday, March 18, 2021							
Surface-Atmosphere Interactions on Icy Worlds: A Volatile Session	1	Cloud-Aerosol and Cloud-Lake Interactions on Titan	March 18, 2021	11:05 am	CDT	Track 1	Xinting Yu
	2	Interplay Between Grain Sintering and Transport-Induced Abrasion in Creating Sand-Sized Sediments on Titan	March 18, 2021	11:08 am	CDT	Track 1	Mathieu Lapotre
	3	Radar Backscatter Properties of the Dragonfly Landing Site	March 18, 2021	11:11 am	CDT	Track 1	Lea Bonnefoy
	4	Methane-Saturated Crust May Prevent the Formation of Detectable Impact Craters on Titan	March 18, 2021	11:14 am	CDT	Track 1	Shigeru Wakita
	5	Collisions with Small Classical Kuiper Belt Objects are Not Sufficient to Cause Substantial Spin Changes to Arrokoth	March 18, 2021	11:17 am	CDT	Track 1	Xiaochen Mao
	6	Nitrogen's Role in the Degradation of Craters on Pluto	March 18, 2021	11:20 am	CDT	Track 1	Joshua Hedgepeth
	7	On the Origin and Thermal Stability of Arrokoth's and Pluto's Ices	March 18, 2021	11:23 am	CDT	Track 1	Carey Lisse
	8	Geomorphological Mapping of Sputnik Planitia and Its Surroundings, and How It`s Shaped by Pluto Internal and External Processes	March 18, 2021	11:26 am	CDT	Track 1	Javier Suárez Valencia

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
Lunar Remote Sensing: Bad Moon Rising	1	New Insights from Chandrayaan-2 Large Area Soft X-Ray Spectrometer	March 18, 2021	11:05 am	CDT	Track 2	Shyama Narendranath
	2	Detecting Olivine Composition in Troctolitic Mixtures in the “Cross-Over” Infrared Range (4–8 μm)	March 18, 2021	11:08 am	CDT	Track 2	Christopher Kremer
	3	Mini-RF X-Band Bistatic Observations of the Moon	March 18, 2021	11:11 am	CDT	Track 2	Gerald Patterson
	4	A Shallow Layered Structure at Chang'E-4 Landing Site Revealed Using Lunar Penetrating Radar	March 18, 2021	11:14 am	CDT	Track 2	Iraklis Giannakis
	5	The Size-Frequency Distribution of Rocky Craters at the Chang'e 5 Landing Site: Rock Abundance as a Probe for Mechanical Properties of Regolith	March 18, 2021	11:17 am	CDT	Track 2	Marley Chertok
	6	LROC NAC Photometry of the Apollo 16 Landing Site: Correlating Feldspathic Compositions Using Landing Site and Sample Data	March 18, 2021	11:20 am	CDT	Track 2	Ryan Watkins
	7	Surface Composition and Mineralogy of the Apennine Bench Formation	March 18, 2021	11:23 am	CDT	Track 2	Sarah Valencia
	8	Mineral Detection Using Chandrayaan-2 Imaging Infrared Spectrometer (IIRS): Some Initial Results	March 18, 2021	11:26 am	CDT	Track 2	Mamta Chauhan
Carbonaceous Chondrites: Parent Body Processing and Organic Matter	1	Tarda (C2-Ung): A New and Unusual Carbonaceous Chondrite Meteorite Fall from Morocco	March 18, 2021	11:05 am	CDT	Track 3	Hasnaa Chennaoui Aoudjehane
	2	Exploring the Planetary Genealogy of Tarda — A Unique New Carbonaceous Chondrite	March 18, 2021	11:08 am	CDT	Track 3	Supratim Dey
	3	Clast Populations Within the CM2.2 Brecciated Carbonaceaous Chondrite Aguas Zarcas: Implications for Understanding Aqueous Alteration on Ryugu	March 18, 2021	11:11 am	CDT	Track 3	Pierre-Etienne Martin
	4	The Fe/S Ratio of Pyrrhotite Group Sulfides in Chondrites is Related to the Degree of Oxidation	March 18, 2021	11:14 am	CDT	Track 3	Devin Schrader
	5	Parent Body Processing in CR Chondrites Recorded by Noble Gases	March 18, 2021	11:17 am	CDT	Track 3	Henner Busemann

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	6	Elemental Composition and Functional Chemistry Variation at the Nanoscale in Insoluble Organic Matter from Carbonaceous Chondrites	March 18, 2021	11:20 am	CDT	Track 3	Rhonda Stroud
	7	Evidence for Extraterrestrial L-Amino Acid Excesses in the CM2 Aguas Zarcas and Murchison Meteorites: Predictions for Ryugu and Bennu	March 18, 2021	11:23 am	CDT	Track 3	Daniel Glavin
	8	Insoluble Organic Matter in Ryugu Analog Meteorite Jbilet Winselwan	March 18, 2021	11:26 am	CDT	Track 3	Bradley De Gregorio
Beginnings: Early Evolution and the Origins of Life	1	The Occurrence of Planets in the Abiogenesis Zone	March 18, 2021	11:05 am	CDT	Track 4	Marcos Jusino-Maldonado
	2	N2 Self-Shielding in the Solar Nebula as the Mechanism of 15N Enrichment in Meteoritic Amino Acids	March 18, 2021	11:08 am	CDT	Track 4	James Lyons
	3	Interplanetary Exchange in the Solar System — Are We Really Biologically Isolated?	March 18, 2021	11:11 am	CDT	Track 4	Margarita Safonova
	4	The Detection of Aromatic Amino Acids in CR Chondrites Suggests They are Prebiotically Plausible	March 18, 2021	11:14 am	CDT	Track 4	Aaron Burton
	5	Synthetic Biology, Astrobiology, and the Search for Life in the Universe	March 18, 2021	11:17 am	CDT	Track 4	Lynn Rothschild
	6	Universal Constraints to Life Derived from Artificial Agents and Games	March 18, 2021	11:20 am	CDT	Track 4	Anamaria Berea
	7	Habitability Models for Planetary Sciences	March 18, 2021	11:23 am	CDT	Track 4	Abel Mendez
	8	Evolution of Terrestrial Habitability	March 18, 2021	11:26 am	CDT	Track 4	Nicole Torres-Santiago
Insight Results: One Martian Year	1	One Martian Year of Seismic Monitoring of Mars by InSight: Seis Results and Perspectives for the Extended Mission	March 18, 2021	11:05 am	CDT	Track 5	Philippe Lognonne
	2	Global Character of the Martian Crust as Revealed by InSight Seismic Data	March 18, 2021	11:08 am	CDT	Track 5	Mark Wieczorek
	3	Crustal Radioactivity on Mars Constrained by InSight Data and Geodynamic Modeling	March 18, 2021	11:11 am	CDT	Track 5	Chloe Michaut
	4	Constraints on the Martian Upper Mantle from InSight Seismic Data	March 18, 2021	11:14 am	CDT	Track 5	Amir Khan
	5	Seismic Detection of the Martian Core by InSight	March 18, 2021	11:17 am	CDT	Track 5	Simon Stähler
	6	Preliminary Results of One Martian Year of Observations from the Radio-Science Experiment of InSight, RISE	March 18, 2021	11:20 am	CDT	Track 5	Sebastien Le Maistre

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	7	Marsquakes' Location and 1-D Seismic Models for Mars from InSight Data	March 18, 2021	11:23 am	CDT	Track 5	Melanie Drilleau
	8	Marsquake Activity Driven by the Sun?	March 18, 2021	11:26 am	CDT	Track 5	Martin Knapmeyer
Break				12:00-12:30 pm	CDT		
NASA Headquarters Briefing (Live Presentations)		NASA Headquarters Briefing	March 18, 2021	12:30 pm	CDT	Plenary	NASA HQ Panel
Break				1:30-2:30 pm	CDT		
Special Session: Scientific Exploration of the Lunar South Pole I	1	Artemis Curation: Preparing for Sample Return from the Lunar South Pole	March 18, 2021	2:35 pm	CDT	Track 1	Julie Mitchell
	2	Structuring Real-Time Science Support of Artemis Crewed Operations: Results from the Lunar Surface Science Workshop #8	March 18, 2021	2:38 pm	CDT	Track 1	Kelsey Young
	3	Life and Research at SouthPole Moonbase: EuroMoonMars Campaigns Results 2019-2020	March 18, 2021	2:41 pm	CDT	Track 1	Bernard Foing
	4	The Volatiles Investigating Polar Exploration Rover (VIPER) Mission	March 18, 2021	2:44 pm	CDT	Track 1	Anthony Colaprete
	5	Lunar Polar Autonomous Micro-Roving for Hydrogenous Volatile Characterization	March 18, 2021	2:47 pm	CDT	Track 1	Paulo Rotband Marchtein Fisch
	6	The Peregrine Ion Trap Mass Spectrometer (PITMS): A CLPS-Delivered Ion Trap Mass Spectrometer for In Situ Studies of the Lunar Water Cycle	March 18, 2021	2:50 pm	CDT	Track 1	Barbara Cohen
	7	Mission of Luna-25, as the First Step of Russian Robotic Moon Exploration Program	March 18, 2021	2:53 pm	CDT	Track 1	Igor Mitrofanov Mitrofanov
	8	Current Status of the Planned Lunar Polar Exploration Mission Jointly Studied by India and Japan	March 18, 2021	2:56 pm	CDT	Track 1	Makiko Ohtake
Bennu And Ryugu: Sample Collection and Return	1	Handling and Description of C-Type Asteroid Ryugu Samples Returned by Hayabusa2	March 18, 2021	2:35 pm	CDT	Track 2	Toru Yada
	2	Anomalously Porous and Dark Rocks on Asteroid (162173) Ryugu	March 18, 2021	2:38 pm	CDT	Track 2	Naoya Sakatani
	3	Collisional and Thermal Evolution of Ryugu's Parent Body Inferred from Bright Boulders	March 18, 2021	2:41 pm	CDT	Track 2	Seiji Sugita
	4	Parent Body of the Hayabusa2 Target (162173) Ryugu: High Porosity, Early Accretion, Small Size	March 18, 2021	2:44 pm	CDT	Track 2	Wladimir Neumann
	5	Topography of Nightingale, the OSIRIS-REx Sample Site on Bennu	March 18, 2021	2:47 pm	CDT	Track 2	Olivier Barnouin

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	6	Landing on an Asteroid: Simulations of the OSIRIS-REx Spacecraft Touching Down on (101955) Bennu	March 18, 2021	2:50 pm	CDT	Track 2	Ronald Ballouz
	7	Bennu's Candidate Sample Sites and Global Surface Characterized by Spectral Clustering of OSIRIS-REx Images	March 18, 2021	2:53 pm	CDT	Track 2	Juan Rizos
	8	Apparently Layered Boulders with Multiple Textures on Bennu's Surface	March 18, 2021	2:56 pm	CDT	Track 2	Kana Ishimaru
Melts on Differentiated Parent Bodies	1	A New Occurrence of Phosphoran Olivine in Ungrouped Achondrite Northwest Africa 12319	March 18, 2021	2:35 pm	CDT	Track 3	Runlian Pang
	2	Experimental Evidence for Formation of Northwest Africa 6962 CR-Related Achondrite from a CR Chondrite Precursor Melt	March 18, 2021	2:38 pm	CDT	Track 3	Daiki Abe
	3	Textural, Geochemical, and Thermodynamic Constraints on the Evolution of Eucrite EET 90020	March 18, 2021	2:41 pm	CDT	Track 3	Jennifer Gorce
	4	26Al Chronology of Erg Chech 002, the Oldest Andesite in the Solar System	March 18, 2021	2:44 pm	CDT	Track 3	Marc Chaussidon
	5	Northwest Africa 6698: Dioritic Partial Melt of the Ureilite Parent Body	March 18, 2021	2:47 pm	CDT	Track 3	Zoltan Vaci
	6	New Major and Trace Element Data from Acapulcoite-Lodranite Clan Meteorites: Evidence for Melt-Rock Reaction Events and Early Collisional Fragmentation of the Parent Body	March 18, 2021	2:50 pm	CDT	Track 3	Michael Lucas
	7	Anomalous 40Ar/39Ar Shock Ages in Mbale: Nonintuitive K and Ar Behavior, Implications for the Interpretation of Shock Ages in Shocked Meteorites	March 18, 2021	2:53 pm	CDT	Track 3	Mara Karageozian
	8	Topography and Impact Melt at Distal Tycho Secondary Chains	March 18, 2021	2:56 pm	CDT	Track 3	Kassandra Martin-Wells
Early Mars Geomorphology I: Warm and Wet, Cold and Dry, or Something in Between?	1	Are We Visiting the Coastlines of Mars? Load-Corrected Paleo-Ocean Levels at Jezero, Oxia Planum, and Gale	March 18, 2021	2:35 pm	CDT	Track 4	Robert Citron
	2	Fluvial Siliciclastic Deposition on an Unvegetated Planet: The Izola Outcrop (Mars)	March 18, 2021	2:38 pm	CDT	Track 4	Francesco Salese
	3	Assessing Controls on the Termination of Overflow Floods for Paleolakes on Mars	March 18, 2021	2:41 pm	CDT	Track 4	Timothy Goudge
	4	The Nature of Modified Impact Craters on Mars	March 18, 2021	2:44 pm	CDT	Track 4	Robert Craddock

Session Title		Presentation Title	Date	Start Time	Time Zone	Track	Speaker Name
	5	Valley Networks and the Fingerprints of Martian Wet Based Glaciation	March 18, 2021	2:47 pm	CDT	Track 4	Anna Grau Galofre
	6	Inverted Fluvial Channels in Terra Sabaea, Mars: Geomorphic Evidence for Proglacial Lakes and Widespread Highlands Glaciation in the Late Noachian	March 18, 2021	2:50 pm	CDT	Track 4	Benjamin Boatwright
	7	The Geology of Isolated Landforms on the Margin of Chryse Planitia, Mars	March 18, 2021	2:53 pm	CDT	Track 4	Joseph McNeil
	8	Her Desher and Nirgal Valles: An Integrated Geomorphic, Structural, and Mineralogic Evaluation of Groundwater Flow in NW Noachis Terra	March 18, 2021	2:56 pm	CDT	Track 4	Debra Buczkowski
Venus: Geology and Geophysics	1	Global Morphologic Map of Tesserae on Venus	March 18, 2021	2:35 pm	CDT	Track 5	Rebekah Albach
	2	The Lachesis Tessera Quadrangle (V-18), Venus	March 18, 2021	2:38 pm	CDT	Track 5	Laura Fattaruso
	3	Geological Mapping of Unnamed Volcanic Event (Centered at 0.6°N and 277.8°E) in Eastern Part of BAT Region, Venus	March 18, 2021	2:41 pm	CDT	Track 5	Ekaterina Antropova
	4	Detailed Mapping of the Volcanic Center Atira Mons, BAT Region, Venus	March 18, 2021	2:44 pm	CDT	Track 5	Carlos Guerra Braga
	5	Uplift Record of Baltis Vallis, Venus	March 18, 2021	2:47 pm	CDT	Track 5	Jack Conrad
	6	A Global Survey of Lithospheric Flexure at Pancake Domes on Venus Reveals Intermediate Elastic Thickness	March 18, 2021	2:50 pm	CDT	Track 5	Madison Borrelli
	7	Crustal Thickness of Venusian Crustal Plateaus	March 18, 2021	2:53 pm	CDT	Track 5	Julia Maia
	8	The Effects of Venus' Thermal Conditions on Multiring Basin Formation	March 18, 2021	2:56 pm	CDT	Track 5	Evan Bjonnes
Break				3:30-4:00 pm	CDT		
Special Session: Scientific Exploration of the Lunar South Pole II	1	Carbon Dioxide Cold Traps on the Moon	March 18, 2021	4:05 pm	CDT	Track 1	Norbert Schorghofer
	2	Moon's Polar Ice and Hematite: A Consequence of Ancient Lunar Dynamo	March 18, 2021	4:08 pm	CDT	Track 1	Chuanfei Dong
	3	The Origin of Volatiles Samples by the LCROSS Mission in Cabeus Crater	March 18, 2021	4:11 pm	CDT	Track 1	Kathleen Mandt
	4	L-Band Radar Observations of Cabeus Crater: Initial Results from DFSAR Onboard Chandrayaan-2 Mission	March 18, 2021	4:14 pm	CDT	Track 1	Sriram Bhiravarasu

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	5	Investigating the Control of Surface Temperature on Surface Ruggedness at the Lunar Poles	March 18, 2021	4:17 pm	CDT	Track 1	Ariel Deutsch
	6	Thermal Gradient in the Lunar South Polar Region Estimated from Infrared and Microwave Observations	March 18, 2021	4:20 pm	CDT	Track 1	Jianqing Feng
	7	Stratigraphy of Ice and Ejecta Deposits at the Lunar Poles: Updates and New Insights	March 18, 2021	4:23 pm	CDT	Track 1	Kevin Cannon
	8	Impact Gardening Does Not Protect South Polar Ice	March 18, 2021	4:26 pm	CDT	Track 1	Emily Costello
Bennu and Ryugu: Surface Evolution	1	Last Epoch of Resurfacing on Asteroid (101955) Bennu Revealed by Global Geologic Map	March 18, 2021	4:05 pm	CDT	Track 2	Erica Jawin
	2	Thermal Infrared Evidence for Limited Compositional and Particle Size Variability on Asteroid (101955) Bennu	March 18, 2021	4:08 pm	CDT	Track 2	Victoria Hamilton
	3	OVIRS Visible to Near-IR Spectral Results at (101955) Bennu	March 18, 2021	4:11 pm	CDT	Track 2	Amy Simon
	4	Hydration State of Asteroid (162173) Ryugu's Surface Using Hayabusa2/NIRS3 Spectral Data	March 18, 2021	4:14 pm	CDT	Track 2	Alice Praet
	5	Albedo and Spectro-Photometric Properties of Ryugu from NIRS3/Hayabusa2, Implications for the Composition of Ryugu, and the Representativity of the Returned Samples	March 18, 2021	4:17 pm	CDT	Track 2	Cedric Pilorget
	6	Rapid Space Weathering Process on Ryugu Inferred from the Artificial Crater	March 18, 2021	4:20 pm	CDT	Track 2	Eri Tatsumi
	7	Surface Flows Mechanism on Asteroid Ryugu Inferred from the Azimuthal Direction of Wake-Like Features on Regolith Around Large Boulders	March 18, 2021	4:23 pm	CDT	Track 2	Naofumi Takaki
	8	Analysis and Simulation of Boulder Mass Movement Sites on Asteroid Bennu	March 18, 2021	4:26 pm	CDT	Track 2	Yuhui Tang
Planetary Differentiation: Accretion, Evolution, Experiments — Lots of Metal	1	Using Moderately Volatile Elements to Probe Planetary Accretion	March 18, 2021	4:05 pm	CDT	Track 3	Francis Nimmo
	2	Potassium Isotope Composition of Mars Reveals a Mechanism of Planetary Volatile Retention	March 18, 2021	4:08 pm	CDT	Track 3	Zhen Tian
	3	Giant Impact Origin for the Large Low Shear Velocity Provinces	March 18, 2021	4:11 pm	CDT	Track 3	Qian Yuan
	4	182Hf-182W Dating of Iron Meteorites and Pallasites: Virtues and Vices	March 18, 2021	4:14 pm	CDT	Track 3	Richard Walker

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	5	Parent Body Histories Recorded in Oxidized Chondrite Sulfides: Implications for Core Formation	March 18, 2021	4:17 pm	CDT	Track 3	Samuel Crossley
	6	Evidence for Rhenium Isotopic Fractionation During Crystallization and Mixing in the IIAB Iron Core	March 18, 2021	4:20 pm	CDT	Track 3	Qing-Feng Mei
	7	Correlated Iron and Silicon Isotope Compositions of Aubrites as Tracers of Differentiation Processes	March 18, 2021	4:23 pm	CDT	Track 3	Soumya Ray
	8	Metal-Silicate Partitioning of Re, Ru, Pt, Os, Ti, Nb, and Ta in Reduced Differentiated Planetary Bodies	March 18, 2021	4:26 pm	CDT	Track 3	Kevin Righter
Early Mars Geomorphology II: Cooler with a Chance of Showers	1	Cold Late Hesperian Climate	March 18, 2021	4:05 pm	CDT	Track 4	Frederic Schmidt
	2	Discordance Mapping of Argyre Basin: An Insight into the Fluvial and Subglacial Origin of Valley Networks in Southern Mars	March 18, 2021	4:08 pm	CDT	Track 4	Rickbir Bahia
	3	Main Topographic and Morphologic Characteristics and Chronology of the Uzboi-Ladon Fluvial System on Mars	March 18, 2021	4:11 pm	CDT	Track 4	Mikhail Ivanov
	4	Interpreting Paleohydrology and Fluvial Dynamics of Martian Channels in the Aeolis Dorsa Region	March 18, 2021	4:14 pm	CDT	Track 4	Catherine Russell
	5	Late Aqueous Activity on Mars: Evidence from Southern Margaritifer Terra and Gale Crater	March 18, 2021	4:17 pm	CDT	Track 4	John Grant
	6	What Do You Call a Martian That (Still) Likes Stream Deposits? A Big Alluvial Fan	March 18, 2021	4:20 pm	CDT	Track 4	Marisa Palucis
	7	Spatially and Temporally Variable Degradation of Large Post-Noachian Impact Craters: A Record of Paleoclimate and Climate Change on Mars	March 18, 2021	4:23 pm	CDT	Track 4	Rossman Irwin III
	8	Relating Thermal Inertia to Crater Shape Characteristics in Equatorial Mars	March 18, 2021	4:26 pm	CDT	Track 4	Wesley Watters
Venus: Coupled Evolution of the Interior, Surface, and Atmosphere	1	The Effects of Intrusive Magmatism on the Mechanical Lithosphere Thickness of Venus	March 18, 2021	4:05 pm	CDT	Track 5	Ana-Catalina Plesa
	2	Large Igneous Provinces: Integrating Lessons from Venus and Earth	March 18, 2021	4:08 pm	CDT	Track 5	Richard Ernst

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	3	Contributions of Volatiles to the Venus Atmosphere from the Observed Extrusive Volcanic Record: Implications for the History of the Venus Atmosphere	March 18, 2021	4:11 pm	CDT	Track 5	James Head III
	4	Punctuated Evolution of the Venusian Atmosphere from Mantle Outgassing	March 18, 2021	4:14 pm	CDT	Track 5	Matthew Weller
	5	Degassing, Decarbonation, and Dehydration: Investigating the Likelihood of a Habitable Era on Venus	March 18, 2021	4:17 pm	CDT	Track 5	Alexandra Warren
	6	An Experimental Study of the Alteration of Basalt on the Surface of Venus	March 18, 2021	4:20 pm	CDT	Track 5	Hannah Teffeteller
	7	Venus Alteration: Model and Experimental Results	March 18, 2021	4:23 pm	CDT	Track 5	Justin Filiberto
	8	Extended, High-Temperature Cooling of Lava Tube Interiors: Analog for Venus	March 18, 2021	4:26 pm	CDT	Track 5	Lindsay McHenry
Friday, March 19, 2021							
High-Impact Lunar Impact Studies	1	Evidence for the Lunar Procellarum Basin: Insights from the Spatial Distribution of Floor-Fractured and Concentric Craters	March 19, 2021	11:05 am	CDT	Track 1	Srinidhi Ravi
	2	Constraining the Thickness of the Lunar Regolith Using Cold-Spot Craters	March 19, 2021	11:08 am	CDT	Track 1	Catherine Elder
	3	The Subsurface Coherent Rock Content of the Moon as Revealed by Cold-Spot Craters	March 19, 2021	11:11 am	CDT	Track 1	Catherine Elder
	4	Prolonged Boulder Exhumation at the Rims of Kilometer-Scale Craters on the Lunar Maria	March 19, 2021	11:14 am	CDT	Track 1	Cole Nypaver
	5	Surface Residence Times of Regolith on the Lunar Maria	March 19, 2021	11:17 am	CDT	Track 1	Patrick O'Brien
	6	Physical Properties of Lunar Impact Melt Deposits	March 19, 2021	11:20 am	CDT	Track 1	Catherine Neish
	7	The Depletion of Craters Larger than 600-800 m in Diameter on the Walls of Lunar Complex Craters	March 19, 2021	11:23 am	CDT	Track 1	Catherine Talkington
	8	Numerical Simulations of the Apollo S-IVB Artificial Impacts on the Moon	March 19, 2021	11:26 am	CDT	Track 1	Andrea Rajsic
Planetary Tectonics and Interiors: Surface Expressions and Deep Issues	1	Plume-Induced Flood Basalts on Hesperian Mars: An Investigation of Hesperia Planum	March 19, 2021	11:05 am	CDT	Track 2	Adrien Broquet
	2	Transpression and Multiphase Deformations Identified from the Discontinuity Patterns in Lunae Planum, Mars	March 19, 2021	11:08 am	CDT	Track 2	Narayan Bose

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	3	Possible Timing of Wrinkle Ridge Formation in Mare Tranquillitatis	March 19, 2021	11:11 am	CDT	Track 2	Thomas Früh
	4	Investigating Morphometric Characteristics of Shortening Structures Across Mars	March 19, 2021	11:14 am	CDT	Track 2	Rachel Atkins
	5	Deep-Seated Thrust Ring Faults Bound Elevated Mantle Plug Beneath Several Lunar Basins	March 19, 2021	11:17 am	CDT	Track 2	Matthew Collins
	6	Evaluating Magma Ascent at Pavonis Mons, Mars Using Stress from Flexure	March 19, 2021	11:20 am	CDT	Track 2	Nicholas Wagner
	7	Compositional Variations of Martian Primary Magmas Due to the Water Loss from the Martian Mantle	March 19, 2021	11:23 am	CDT	Track 2	Johnny Seales Jr
	8	Plate Tectonics on Mars Hindered by Buoyant Martian Eclogite	March 19, 2021	11:26 am	CDT	Track 2	Jin Zhang
The Legacy of Arecibo Observatory in Planetary Science	1	The Legacy of Arecibo Observatory in Planetary Science and Beyond	March 19, 2021	11:05 am	CDT	Track 3	Patrick Taylor
	2	Arecibo S-Band Radar Characterization of the Mercurian North Polar Deposits	March 19, 2021	11:08 am	CDT	Track 3	Edgard Rivera-Valentín
	3	The Earth-Based Radar Search for Volcanic Activity on Venus	March 19, 2021	11:11 am	CDT	Track 3	Bruce Campbell
	4	The Moon at 12.6 cm: Legacy of Arecibo/LRO Mini-RF Partnership	March 19, 2021	11:14 am	CDT	Track 3	Gareth Morgan
	5	Constraints on the Water-Production Rates of Interstellar Comet 2I/Borisov from Arecibo Radio OH Observations	March 19, 2021	11:17 am	CDT	Track 3	Kevin Ortiz Ceballos
	6	Asteroid (16) Psyche: A Ferrovolcanic World?	March 19, 2021	11:20 am	CDT	Track 3	Michael Shepard
	7	Radar Observations of Near-Earth Asteroid 2019 OK	March 19, 2021	11:23 am	CDT	Track 3	Luisa Fernanda Zambrano-Marin
	8	The Heterogeneous Population of Near-Earth Asteroids Revealed by the Arecibo Planetary Radar	March 19, 2021	11:26 am	CDT	Track 3	Michael Nolan
Modern Mars: Earth, Wind, and Ice	1	Comparison of Degradation Rates at the InSight and Spirit Landing Sites on Mars	March 19, 2021	11:05 am	CDT	Track 4	Matthew Golombek
	2	Slow Hillslope Processes on Equatorial Mars as Revealed by the Topographic Diffusivity of Km-Scale Crater Rims	March 19, 2021	11:08 am	CDT	Track 4	Caleb Fassett
	3	Using Thermal Inertia and Short-Wave Infrared Spectroscopy to Characterize Lithified Bedforms on Mars	March 19, 2021	11:11 am	CDT	Track 4	Aaron Weintraub

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	4	Characteristics of the Basal Interface of the Martian South Polar Layered Deposits	March 19, 2021	11:14 am	CDT	Track 4	Aditya Khuller
	5	Seasonality and Surface Properties of Slope Streaks at Acheron Fossae	March 19, 2021	11:17 am	CDT	Track 4	Katherine Primm
	6	Observing Seasonal Ices on Gullied Slopes in Sisyphi Cavi with CaSSIS and HiRISE	March 19, 2021	11:20 am	CDT	Track 4	Kelly Pasquon
	7	The Elevation Distribution of Mid-Latitude Gullies on Mars as a Test of CO2 and H2O Formation and Modification Processes	March 19, 2021	11:23 am	CDT	Track 4	James Dickson
	8	Potential for Sampling of Subglacial and Englacial Environments in Mars' Mid Latitudes, Without Deep Drilling	March 19, 2021	11:26 am	CDT	Track 4	Frances Butcher
Organics: Early Synthesis and Detection	1	Abiotic Synthesis of Organic Matter in Aqueous Environments Simulating Parent Bodies of Meteorites and the Effects of Minerals on the Production of Amino Acids	March 19, 2021	11:05 am	CDT	Track 5	Walaa Elmasry Dr.
	2	Ribose Stability in Solutions with Borate and Borate-Bearing Clays: Implications for Origins of Life on Earth and Mars	March 19, 2021	11:08 am	CDT	Track 5	Shelbie Legett
	3	Reactive Transport Modeling to Interpret Environmental Conditions that May Preserve Organic Molecules on Mars	March 19, 2021	11:11 am	CDT	Track 5	Elisabeth Hausrath
	4	Focusing the Search for Organic Biosignatures on Mars	March 19, 2021	11:14 am	CDT	Track 5	Dorothy Oehler
	5	Trimethylsulfonium Hydroxide (TMSH) Thermochemolysis with Py-GC-MS as a Method of Organic Biosignature Detection: Optimization for Nucleobase Detection	March 19, 2021	11:17 am	CDT	Track 5	Lydia Kivrak
	6	Assessing Mars Pyrolysis Data for the Presence of Organic Salts	March 19, 2021	11:20 am	CDT	Track 5	James Lewis
	7	Organic Molecules Revealed in Glen Torridon by the SAM Instrument	March 19, 2021	11:23 am	CDT	Track 5	Maëva Millan
	8	Organic Molecules Detected with the First TMAH Wet Chemistry Experiment, Gale Crater, Mars	March 19, 2021	11:26 am	CDT	Track 5	Amy Williams
Break				12:00-12:30 pm	CDT		
Decadal Survey (Live Presentations)		Decadal Survey	March 19, 2021	12:30 pm	CDT	Plenary	Panel

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
Break				1:30-2:30 pm	CDT		
Lunar Volcanism and Tectonics	1	Investigating the Mineralogy and Origin of Irregular Mare Patches with Spectra from Moon Mineralogy Mapper	March 19, 2021	2:35 pm	CDT	Track 1	Hunter Vannier
	2	Morphometry, Morphology, and Topography of Volcanic Cones in Marius Hill, the Moon	March 19, 2021	2:38 pm	CDT	Track 1	Sheng Wan
	3	Occurrence and Origin of Lunar Pits: Observations from a New Catalog	March 19, 2021	2:41 pm	CDT	Track 1	Robert Wagner
	4	Laccolith Model for Lunar Ring-Moat Dome Structures	March 19, 2021	2:44 pm	CDT	Track 1	Ian Garrick-Bethell
	5	Global Drivers of Lunar Rockfall	March 19, 2021	2:47 pm	CDT	Track 1	Valentin Bickel
	6	Analyses of Compositional and Topographical Characters of the Wrinkle Ridge and Dark Holo Crater on Mare Orientale Basin	March 19, 2021	2:50 pm	CDT	Track 1	Karthi Annamalai
	7	Exploring the Source of the Lunar Linear Gravity Anomalies	March 19, 2021	2:53 pm	CDT	Track 1	Weigang Liang
	8	Variations in Lunar Elastic Thickness from Spectral Admittance Analysis and Synthetic Noise Tests	March 19, 2021	2:56 pm	CDT	Track 1	Rachel Maxwell
Small Body Regolith and Interiors: Laboratory Studies and Modeling	1	Almahata Sitta is No More Exotic Than any Other Polymict Ureilite	March 19, 2021	2:35 pm	CDT	Track 2	Cyrena Goodrich
	2	Cohesive Force Measurements of Meteorite Powders	March 19, 2021	2:38 pm	CDT	Track 2	Yuuya Nagaashi
	3	AFM Measurements of Asteroid-Relevant Particle Adhesion	March 19, 2021	2:41 pm	CDT	Track 2	Keanna Jardine
	4	Coefficient of Restitution / Leeb Hardness for Six Meteorites and HCCL-1 Simulant	March 19, 2021	2:44 pm	CDT	Track 2	Alan Hildebrand
	5	The Potential Role of Asteroid Class on Surface Slopes: Investigating the Effects of Density and Spin Period	March 19, 2021	2:47 pm	CDT	Track 2	Hannah Susorney
	6	Small Body Radar Inverse Scattering in Monostatic and Bistatic Geometries	March 19, 2021	2:50 pm	CDT	Track 2	Mark Haynes
	7	Geophysical Constraints on Phobos's Interior Structure	March 19, 2021	2:53 pm	CDT	Track 2	Andrei Dmitrovskii
	8	Tidal Dissipation in Binaries of Asteroid Pairs	March 19, 2021	2:56 pm	CDT	Track 2	Laurent Pou
Martian Meteorites: Petrology and Petrogenesis	1	The Plagioclase-Bearing Poikilitic Shergottite Northwest Africa 12241, a Not-So Shocked Martian Meteorite	March 19, 2021	2:35 pm	CDT	Track 3	Arya Udry

Session Title		Presentation Title	Date	Start Time	Time Zone	Track	Speaker Name
	2	Petrogenesis of Northwest Africa (NWA) 8686, a New Olivine-Phyric Shergottite	March 19, 2021	2:38 pm	CDT	Track 3	Willie Nicklas
	3	Crystallization History of Martian Meteorite Northwest Africa 13227: A New Olivine Gabbroic Shergottite	March 19, 2021	2:41 pm	CDT	Track 3	Sophie Benaroya
	4	Late-Stage Oxidation of Yamato 980459 Shergottite: Evidence from Chromite + Silica Trails in Olivine	March 19, 2021	2:44 pm	CDT	Track 3	Shaofan Che
	5	The Oxidation State of Sulfur in Apatites from Martian Meteorite — Shergotty	March 19, 2021	2:47 pm	CDT	Track 3	Proteek Chowdhury
	6	The Role of Assimilation and Fractional Crystallization in Evolved Martian Crustal Compositions	March 19, 2021	2:50 pm	CDT	Track 3	Amanda Ostwald
	7	Assimilation of Fossil Hydrothermal Sulfide by Early Amazonian Martian Magmas: Implications for Ore Mineralization on Mars	March 19, 2021	2:53 pm	CDT	Track 3	Munir Humayun
	8	Elemental Partitioning Constraints on the Mineralogy of the Martian Mantle	March 19, 2021	2:56 pm	CDT	Track 3	Shuying Yang
Ice at the Martian Poles	1	Mars' Obliquity-Driven Mobile CO2 Inventory Derived from Polar Stratigraphy	March 19, 2021	2:35 pm	CDT	Track 4	Peter Buhler
	2	CO2 Glaciers on the South Polar Layered Deposits of Mars	March 19, 2021	2:38 pm	CDT	Track 4	Isaac Smith
	3	Monitoring of CO2 Seasonal Variations at the Martian Polar Ice Caps Using SHARAD Data	March 19, 2021	2:41 pm	CDT	Track 4	Maria Carmela Raguso
	4	Experimental Setup to Record the Bidirectional Reflectance Distribution Function of CO2 Ice Under Polar Martian Conditions	March 19, 2021	2:44 pm	CDT	Track 4	Rushana Karimova
	5	Identification of Spectral Endmembers in the Martian South Polar Residual Cap	March 19, 2021	2:47 pm	CDT	Track 4	Samuel Cartwright
	6	Development and Evolution of Exposed Icy Layers at Mars' North Pole Through Space and Time	March 19, 2021	2:50 pm	CDT	Track 4	Alyssa Pascuzzo
	7	New Radar Evidence of Subglacial Liquid Water Below the Martian South Pole	March 19, 2021	2:53 pm	CDT	Track 4	Sebastian Lauro
	8	Explaining Bright Radar Reflections in the Martian SPLD Without Liquid Water	March 19, 2021	2:56 pm	CDT	Track 4	Daniel Lalich
Microbes: Where We Live	1	Habitability of Cloudy Worlds: Intersecting Constraints and Unknowns	March 19, 2021	2:35 pm	CDT	Track 5	Diana Gentry

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	2	A Drilling Mission to Search for Biosignatures of Life on Mars Simulated in Atacama Chile	March 19, 2021	2:38 pm	CDT	Track 5	Carol Stoker
	3	The Identification of Sulfide Oxidation as a Potential Metabolism Driving Primary Production on Late Noachian Mars	March 19, 2021	2:41 pm	CDT	Track 5	Michael Macey
	4	Habitability of Eridania Lake: An Ancient Mars Lacustrine Hydrothermal Vent, Compared to an Icelandic Analogue Fjord Site	March 19, 2021	2:44 pm	CDT	Track 5	Holly Rucker
	5	Alteration-Associated Spatial Distribution of Organic Biosignatures in Mars-Analogue Volcanic Rocks	March 19, 2021	2:47 pm	CDT	Track 5	Catheryn Ryan
	6	Lunar and Martian Lava Tube Research Simulation at HI-SEAS	March 19, 2021	2:50 pm	CDT	Track 5	Michaela Musilova
	7	Life in the Dark: The Blue Dragon Flow as an Analog for the Martian Subsurface	March 19, 2021	2:53 pm	CDT	Track 5	Margaret Weng
	8	Microbial Survival in an Extreme Martian Analog Ecosystem: Poás Volcano, Costa Rica	March 19, 2021	2:56 pm	CDT	Track 5	Justin Wang
Break				3:30-4:00 pm	CDT		
Space Weathering on Airless Planetary Bodies: Beyond Lunar-Style Space Weathering	1	Simulating Solar-Wind-Ion Sputtering of Sodium from Silicate Minerals: The Importance of the Surface Binding Energy	March 19, 2021	4:05 pm	CDT	Track 1	Liam Morrissey
	2	Experimental Investigation of the Space Weathering of Phobos by Planetary Oxygen Ions	March 19, 2021	4:08 pm	CDT	Track 1	Paul Szabo
	3	Micro-FTIR Imaging and Spectroscopy of Experimentally Space Weathered CM2 Chondrite Murchison	March 19, 2021	4:11 pm	CDT	Track 1	Timothy Glotch
	4	Understanding Space Weathering of Carbonaceous Asteroids Through H+ and He+ Ion Irradiation of the Murchison Meteorite	March 19, 2021	4:14 pm	CDT	Track 1	Dara Laczniak
	5	Space Weathering Features in a Sulfide Grain from Asteroid Itokawa	March 19, 2021	4:17 pm	CDT	Track 1	Laura Chaves
	6	Laboratory Simulations of Troilite Space Weathering by Solar Wind Ion Irradiation: Surface, Composition, and Spectral Effects	March 19, 2021	4:20 pm	CDT	Track 1	John Christoph
	7	Modeling the Effect of Solar Ion Irradiation of Troilite with SDTrimSP ––Implications for (16) Psyche	March 19, 2021	4:23 pm	CDT	Track 1	Catherine Dukes

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	8	Latitude Dependence of Spectral Properties on Bennu: Relevance to Space Weathering	March 19, 2021	4:26 pm	CDT	Track 1	Antara Sen
Small Body Evolution: Forces of Heat and Light	1	Experiment on Thermal Fatigue of Near-Earth Asteroids and Lunar Surfaces Using Representative Temperature Conditions and Samples	March 19, 2021	4:05 pm	CDT	Track 2	Markus Patzek
	2	Minimum Perihelion Distances and Dwell Times During the Dynamical Evolution of NEOs	March 19, 2021	4:08 pm	CDT	Track 2	Athanasia Toliou
	3	Modeling Thermophysical Properties of 2100 Ra-Shalom	March 19, 2021	4:11 pm	CDT	Track 2	Kiana McFadden
	4	Unexpected Thermal Properties of the Near-Earth Object (499998) 2011 PT	March 19, 2021	4:14 pm	CDT	Track 2	Marco Fenucci
	5	YORP Effect on Asteroid 162173 Ryugu and Its Spin Evolution	March 19, 2021	4:17 pm	CDT	Track 2	Masanori Kanamaru
	6	Modeling the Seasonal Evolution of 67P/Churyumov-Gerasimenko Water Loss Rate	March 19, 2021	4:20 pm	CDT	Track 2	Mauro Ciarniello
	7	Asteroid Thermal Evolution with Fragmentation and Reassembly into a Rubble Pile	March 19, 2021	4:23 pm	CDT	Track 2	Jialong Ren
	8	Modeling Carbon Outgassing from Anhydrous Planetesimals	March 19, 2021	4:26 pm	CDT	Track 2	Bo Peng
Lunar Geochemistry and Petrology	1	Ghadduwah 001: Uniquely Unbrecciated Ferroan Anorthosite Lunar Meteorite	March 19, 2021	4:05 pm	CDT	Track 3	Carl Agee
	2	Chlorine and Hydrogen in Brecciated Lunar Meteorites: Implications for Lunar Volatile History	March 19, 2021	4:08 pm	CDT	Track 3	Tara Hayden
	3	Moderately Volatile Elements in Lunar Basalts; New Insights on LMO and Source Region Evolution	March 19, 2021	4:11 pm	CDT	Track 3	David Burney
	4	Magmatic Fractionation and Degassing of Siderophile Volatile Elements in Lunar Magmatic Rocks	March 19, 2021	4:14 pm	CDT	Track 3	Philipp Gleißner
	5	Provenance of Lunar Basaltic Meteorite Northwest Africa 8632 and Related Meteorites	March 19, 2021	4:17 pm	CDT	Track 3	Alissa Madera
	6	Apollo Sample 12032,366-18: Characterization and Experimental Investigation of a Chemically Evolved Lunar Basalt	March 19, 2021	4:20 pm	CDT	Track 3	Amanda Stadermann

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	7	New Insights into the Geological Evolution of the Moon via Petrologic Investigation of Lunar Basalt Meteorites Dominion Range 18262 and Dominion Range 18666	March 19, 2021	4:23 pm	CDT	Track 3	Schelin Ireland
	8	A New Dimension to Lunar Magmatism: New Interpretations of Apollo Basalt Petrogenesis from X-Ray Computed Tomography	March 19, 2021	4:26 pm	CDT	Track 3	Aleksandra Gawronska
Icy Mars Geomorphology	1	Interannual Variability of Ice Within North Polar Layered Deposits Craters on Mars	March 19, 2021	4:05 pm	CDT	Track 4	Margaret Landis
	2	Pervasive Ice-Related Erosion of Mid-Latitude Martian Craters	March 19, 2021	4:08 pm	CDT	Track 4	Alan Howard
	3	Quantifying the Environmental Response to Deglaciation in Martian Craters During the Late Amazonian	March 19, 2021	4:11 pm	CDT	Track 4	Lisette Melendez
	4	Multiple Sites of Amazonian Wet-Based Glaciation Identified in West Tempe Terra, Mars	March 19, 2021	4:14 pm	CDT	Track 4	Savana Woodley
	5	Molards — A New Landform Revealing Ice-Ejecta Interactions on Mars	March 19, 2021	4:17 pm	CDT	Track 4	Susan Conway
	6	Subsurface Radar Observations of Outlier Polar Ice Deposits on Mars	March 19, 2021	4:20 pm	CDT	Track 4	Riley McGlasson
	7	Boulder Bands on Lobate Debris Aprons: Debris-Covered Glacier Growth at Martian Mid-Latitudes Spans Multiple Glaciations	March 19, 2021	4:23 pm	CDT	Track 4	Joseph Levy
	8	Deformation of the Banded Terrain of Hellas Planitia, Mars	March 19, 2021	4:26 pm	CDT	Track 4	Claire Cook
Environments: Habitability and Organic Preservation	1	Enlarging the Geographical Domain of the Impact Origin of Life Hypothesis	March 19, 2021	4:05 pm	CDT	Track 5	David Kring
	2	A Preliminary Simulation of the Hydrothermal System at the Boltysh Impact Structure	March 19, 2021	4:08 pm	CDT	Track 5	Annemarie Pickersgill
	3	Exploring the Reactivity of Metabolically Relevant Precursors Under Hydrothermal Analog Settings	March 19, 2021	4:11 pm	CDT	Track 5	Jessica Weber
	4	Fluid Flow in the Martian Subsurface During the Early Amazonian Period Constrained via Numerical Simulations: Implications for Habitability	March 19, 2021	4:14 pm	CDT	Track 5	Evangelos Christou
	5	Molecular Biosignature Preservation Potential in Subsurface Martian Brines	March 19, 2021	4:17 pm	CDT	Track 5	Ardith Bravenec

Session Title	Presentation Title		Date	Start Time	Time Zone	Track	Speaker Name
	6	Determining the Biosignature Preservation Potential of Manganese Oxides Using Laboratory and Spaceflight Analysis Techniques	March 19, 2021	4:20 pm	CDT	Track 5	Lauren Judge
	7	Experimental Investigation of Deliquescence-Driven Liquid Brine Formation with Calcium Perchlorate in a Mars-Like Environment	March 19, 2021	4:23 pm	CDT	Track 5	Rachel Slank
	8	Investigating the Potential of X-Ray Diffraction Coupled with Evolved Gas Analysis in Our Search for Organic Salts on Mars	March 19, 2021	4:26 pm	CDT	Track 5	Maxwell Craddock