EXPLORATION SCIENCE FORUM, Day 1

Time/Date	DAY 1: Wednesday, July 20, 2016			LOCATION / SPEAKER
7:00	POSTER SETUP BEGINS			BUILDING 152
7:30	STUDENT LIGHTNING ROUND PRESENTATIONS: Breakfast with SSERVI Director			BUILDING 152
8-8:30AM	REGISTRATION			BUILDING 152
8:30	PLENARY SESSION I: Welcome and Award Presentations. Chair: Yvonne Pendleton			BUILDING 152 MAIN ROOM
8:30	Welcome speakers: Eugene Tu, Victoria Friedensen, Yvonne Pendleton			BUILDING 152 MAIN ROOM
8:45	Welcome talk: Shoemaker, Wargo, and Niebur Awards			BUILDING 152 MAIN ROOM
10:05	PLENARY SESSION II: Mission and International Participation Updates. Chair: Greg Schmidt			BUILDING 152 MAIN ROOM
10:05	William Bottke Exploration Science: The Year in Review William Bottke			BUILDING 152 MAIN ROOM
10:25	Mission Talk: Daniel Andrews An Update on the Resource Prospector Mission: Recent Efforts and Current Plans			BUILDING 152 MAIN ROOM
10:45	BREAK			
10:55	Noah Petro (Invited Talk) The Lunar Reconnaissance Orbiter Mission at 7 Years: Status and Future Prospects			BUILDING 152 MAIN ROOM
11:15	James Carpenter (Invited Talk) Building ESA's Lunar Exploration Mission Capabilities			BUILDING 152 MAIN ROOM
11:35	Gwanghyeok Ju (Invited Talk) Prospective Lunar Science Activities in Korean Lunar Mission			BUILDING 152 MAIN ROOM
11:55	LUNCH / POSTER VIEWING / Focus Group Sessions			
1:30	PLENARY SESSION II continued: Mission and International Participation Updates. Chair: Greg Schmidt			BUILDING 152 MAIN ROOM
1:30	Greg Schmidt (Invited Talk) GER Science White Paper update/overview			BUILDING 152 MAIN ROOM
1:50	Alastair Wayman (Invited Talk) UK Space Industry Involvement in Exploration Missions			BUILDING 152 MAIN ROOM
2:10	PLENARY SESSION III: Lunar Surface and Small Bodies Overview. Chair: Brad Bailey			BUILDING 152 MAIN ROOM
2:10	Jeff Plescia Parallel Session #1 Overview Talk: New Views of the Lunar Regolith			BUILDING 152 MAIN ROOM
2:30	Pascal Lee Parallel Session #2 Overview Talk: Results from Phobos/Deimos Conference			BUILDING 152 MAIN ROOM
2:50	First Lightning Round: Student Poster Talks			BUILDING 152 MAIN ROOM
3:00	Transition to Parallel Session Rooms			
	Parallel Session #1 Lunar Surface (Regolith, Volatile Implantation, and Magenetism)	BUILDING 152 MAIN ROOM	Parallel Session #2 Origin, Evolution, and Exploration of Phobos, Deimos, and Other Small Bodies	BUILDING 152 SIDE ROOM
	Chairs: Jeff Plescia, Jamey Szalay		Chairs: Adrian Brown, Julien Salmon	
3:15	Kyeong Kim Silicon Variation on the Moon as observed by the Kaguya GRS and Chandrayaan-1 Moon Mineralogy Mapper (M^3) Calibration		Pascal Lee Phobos and Deimos: The Comet Connection	
3:30	Jamey Szalay Meteoritic Bombardment at the Moon and LADEE/LDEX Derived Gardening Rates		Julien Salmon Formation of Phobos and Deimos via a Giant Impact on Mars	
3:45	Thomas Orlando Solar Wind Interactions and the Evolution of Hydroxyl on the Moon		Ngoc Truong Water on Phobos and Deimos: Implications of Water in Tektites for the Giant Impact Origin Hypothesis.	
4:00	Jan Deca Solar Wind Interaction with Lunar Magnetic Anomalies: Reiner Gamma		Adrian Brown Shape Dependent Spectral Bluing on 101955 Bennu and Implications for Dynamics of Sub Micron Regolith Grains on Asteroids	
4:15	Joshua Cahill A Global Far-Ultraviolet Perspective of Lunar Swirls and Regolith Maturation		Gal Sarid Internal Affairs of Small Primitive Asteroids: Thermo-Physical Evolution Context for Carbonaceous and Volatile-Rich Bodies	
4:30	DISCUSSION: NEXT STEPS		DISCUSSION: NEXT STEPS	
4:45	POSTER SESSION runs 4:45-7:00PM			BUILDING 152 MAIN ROOM

EXPLORATION SCIENCE FORUM, Day 2				
Time/Date	DAY 2: Thursday, July 21, 2016			Location/Speaker
8-8:30AM	REGISTRATION			BUILDING 152
START 8:30 AM	PLENARY SESSION IV Mission Concepts and Dust/Exosphere Overview. Chair: Brad Bailey			BUILDING 152 MAIN ROOM
8:30	David Kring Parallel Session #3 Overview Talk Potential Exploration Mission Science and Exploration Objectives			BUILDING 152 MAIN ROOM
8:50	Mihaly Horanyi Parallel Session #4 Overview Talk Dust and Spacecraft Charging Effects Near Asteroids and Comets			BUILDING 152 MAIN ROOM
9:10	Second Lightning Round: Student Poster Talks			BUILDING 152 MAIN ROOM
9:20	Transition to Parallel Session Rooms			
	Parallel Session #3: Mission Concepts, Roadmaps, and Perspectives	BUILDING 152 MAIN ROOM	Parallel Session #4: Dust, Exosphere, and Magnetism	BUILDING 152 SIDE ROOM
	Chairs: Jake Bleacher, Margaret Race		Chairs: Matthew Siegler, Anthony Colaprete	
9:25	Jack Burns A Surface Telerobotics Roadmap for Exploration and Space Science		William Yu Numerical Modeling of Dust Dynamics around Small Asteroids	
9:40	James Head Exploration of Planetary Crusts: A Human/Robotic Exploration Design Reference Campaign to the Lunar Orientale Basin		Cesare Grava Search for a Lunar Nanodust Exosphere with LRO's LAMP UV Spectrograph	
9:55	Anthony Colaprete Traverse and Observation Planning for the Resource Prospector Mission: A Case		Donald Hendrix Identification of Mechanicaly Induced Radical Species and Hydroxyl Radicals Via Electron Paramagnetic Resonance	
10:10	Jeff Plescia Seismic Exploration of Small Bodies		Anthony Colaprete Observations of Titanium, Aluminum and Magnesium in the Lunar Exosphere by LADEE UVS	
10:25	Jacob Bleacher Evaluating the Benefit of Low Latency Telerobotics on Human Planetary Exploration and Science		Menelaos Sarantos Migration rates of exospheric sodium and potassium from LADEE data	
10:40	Margaret Race Planetary Protection Knowledge Gaps for Human Extraterrestrial Missions: Report on Workshop Findings		Matthew Siegler Lunar True Polar Wander Inferred from Polar Hydrogen	
10:55	Transition to Plenary Room (MAIN ROOM)			BUILDING 152 MAIN ROOM
11:00	NASA Town Hall -- Jim Green (SMD) and Victoria Friedensen (HEOMD)			BUILDING 152 MAIN ROOM
12:00	LUNCH / POSTER VIEWING, Focus Group Meetings (See Page 8)			
START 1:30	Parallel Session #3: Mission Concepts, Roadmaps, and Perspectives (Continued)	BUILDING 152 MAIN ROOM	Parallel Session #4: Dust, Exosphere, and Magnetism (continued)	BUILDING 152 SIDE ROOM
1:30	Vidvuds Beldavs Foundations for the Post 2030 Space Economy: Cislunar and Lunar Infrastructure, Creation of Markets for ISRU		Michael Collier Stairstep Particle Flux Spectra on the Lunar Surface: Evidence for Nonmonotonic Potentials?	
1:45	Daniel Britt Economics and Exploration: More Historical Perspective on the New Age of Exploration		Harlan Spence Radiation Environments at Solar System Destinations: Exploration Constraints and Scientific Discovery	
2:00	DISCUSSION: NEXT STEPS		DISCUSSION: NEXT STEPS	
2:15	PLENARY SESSION V: Instrumentation and Volatiles. Chair: Brad Bailey			BUILDING 152 MAIN ROOM
2:15	Julie Castillo-Rogez Parallel Session #5 Overview Talk: Status Update on the Near Earth Asteroid Scout CubeSat Mission			
2:35	Ariel Deutsch Parallel Session #6 Overview Talk: Microsymposium 57: Polar Volatiles on the Moon and Mercury: Nature, Evolution, and Future Exploration			
2:55	Lightning Round C: Student Poster Previews			BUILDING 152 MAIN ROOM
3:05	Transition to Parallel Session Rooms			
	Parallel Session #5. Exploration Concepts, Instrumentation, and Monitoring of Small Bodies	BUILDING 152 MAIN ROOM	Parallel Session #6. Volatiles in the Solar System	BUILDING 152 SIDE ROOM
	Chairs: Daniel Mazanek, Pascal Lee		Chairs: Bill Bottke, Amanda Cook	
3:15	Daniel Scheeres Surface Motion and Speed Limits on Small Bodies		Dana Hurley Simulations and Measurements of Water from Impacts on the Moon	
3:30	Benjamin Hockman Spacecraft/Rover Hybrids for the Exploration of Small Solar System Bodies		William Bottke Express Delivery of Water to Mercury and the Moon	
3:45	Paul Abell Oveview of the Asteroid Redirect Mission		William Farrell Cold Trapping of Lunar Polar Crater Volatiles: A Comparison of Two Theories	
4:00	Daniel Mazanek Overview of the Asteroid Redirect Mission (ARM) Formulation Assessment and Support Team (FAST)		Barbara Cohen Numerical Investigations of Hydrated Mineral Formation on Small-Body Surfaces	
4:15	Victoria Friedensen NASA's Planetary Defense Coordination Office: Summary of Activities		Kris Zacny Planetary Volatiles Extractor	
4:30	Phil Bland The Desert Fireball Network		Amanda Cook Spectral & Imaging System for Identifying Hydration on Airless Bodies	
4:45	Yara Al-Rajeh Going global with the Desert Fireball Network (DFN): Opportunities and Challenges		Erik Johnson The Design of the mini-Neutron Spectrometer for the Lunar Hydrogen Mapper	
5:00	DISCUSSION: NEXT STEPS		DISCUSSION: NEXT STEPS	
5:15	Transition to Main Room			
5:20	LEAG and SBAG Town Hall			BUILDING 152 MAIN ROOM
6-7:30PM	POSTER SESSION			BUILDING 152

EXPLORATION SCIENCE FORUM, Day 3				
Time/Date		Day 3		Location/Speaker
8-8:30AM	REGISTRATION			BUILDING 152
START 8:30	PLENARY SESSION VI: Volcanism and Regolith Overview. Chair: David Morrison			BUILDING 152 MAIN ROOM
8:45	Jake Bleacher (Invited Talk) NASA Astronaut Geological Training			
9:05	James Head Parallel Session #7 Overview Talk: Generation, Ascent and Eruption of Magma on the Moon: New Insights Into Emplacement			
9:25	Carle Pieters Parallel Session #8 Overview Talk: The Time Scale of Space Weathering			
9:45	Transition to Parallel Session Rooms			
	Parallel Session #7.Volcanism- Magmatic Processes and Exploration	BUILDING 152 MAIN ROOM	Parallel Session #8. Down and Dirty in the Regolith: Weathering, Composition, and Microgravity Experiments	BUILDING 152 SIDE ROOM
	Chairs: Noah Petro, Derek Sears		Chairs: Addie Dove, Carle Pieters	
10:00	Lauren Jozwiak Formation and Evolution of Lunar Floor-Fractured Craters: Insights into Lunar Magmatic Processes		Daniel Britt UCF/DSI Asteroid Simulants	
10:15	Noah Petro Determining the Origin of Filled Craters Within the South Pole-Aitken Basin		Adrienne Dove Experimental Exploration of Granular Motion on Low-Gravity Planetary Surfaces	
10:30	Gen Ito Incorporation of Portable Infrared Spectral Imaging into Planetary Geological Field Work: Analog Studies at Kilauea, Hawaii		Julie Brisset Microgravity Experiments On The Response Of Planetary Regolith To Low-Velocity Impacts	
10:45	Derek Sears Thermoluminescence Dating of Volcanism on Hawaii: Preliminary Results		Carey Legett Characterizing the Optical Effects of Nanophase Absorbers and Mineral Powders	
11:00	Brian Shiro Geophysical Investigation of Lava Tubes at the HI-SEAS Planetary Analog Site in Hawaii		Amanda Hendrix Regional Variations in Lunar Far-Ultraviolet Characteristics	
11:15	W. Brent Garry Exploring Lava Tubes with Lidar at Craters of the Moon National Monument and Preserve, Idaho		Katherine Shirley Minerals and Mixtures Under Simulated Lunar Environment	
11:30	DISCUSSION: NEXT STEPS		DISCUSSION: NEXT STEPS	
11:45-1:00	LUNCH/POSTER VIEWING and MEDIA EVENT			
START 1:00	PLENARY SESSION VII: Impacts and Exploration. Chair: Brad Bailey			BUILDING 152 MAIN ROOM
1:00	Mikhail Kreslavsky Parallel Session #9 Overview Talk: Morphology of Mare-Forming Lava Flows on the Moon Revealed by Laser Ranging			
1:20	Brian Day Parallel Session #10 Overview Talk: NASA Lunar and Planetary Mapping and Modeling			
1:40	Transition to Parallel Session Rooms			
	Parallel Session #9. Volcanic and Impact Features and Products	BUILDING 152 MAIN ROOM	Parallel Session #10. Future and Continued Exploration of the Moon and its Surrounding Area	BUILDING 152 SIDE ROOM
	Chairs: Ross Potter, Amy Fagan		Chairs: Richard Miller, Pam Clark	
1:45	James Head Ina Pit Crater on the Moon: Origin as a Drained Lava Lake Modified by Seismic Sifting		Raul Monsalve The EDGES and DARE Precision Cosmology Experiments	
2:00	David Weiss Distinguishing Between a Tectonic or Volcanic Origin for the Lunar Rilles		RIchard Miller First Light: Astrophysics from the Moon	
2:15	Erica Jawin Huge Pyroclastic Cones Surrounding Cobra Head, and Implications for the Eruptive History on the Aristarchus Plateau		Jordan Mirocha Galaxy Formation From the Moon: A Forecast	
2:30	James Cassanelli Did the Orientale Impact Melt Sheet Undergo Large-scale Igneous Differentiation by Crystal Settling?		Bang Nhan Direct Foreground Constraint at the Low-Frequency Regime for 21-cm Cosmology using Source-Projection Induced Polarimetry	
2:45	Ross Potter Peas in a Planetary Pod? Lunar and Mercurian Impact Basin Formation - the Same or Different?		Simone Dell'Agnello International, Private-Public, Multi-mission Payload Agreements for Next Generation Lunar Laser Retroreflectors	
3:00	Srinidhi Ravi Identifying Copernican and Eratosthenian Craters from LROC Images		Pamela Clark Lunar Ice Cube MIssion Science and Payload	
3:15	DISCUSSION: NEXT STEPS		DISCUSSION: NEXT STEPS	
3:30	Transition to MAIN ROOM			
3:40	PLENARY SESSION VIII: Chair: Yvonne Pendleton			BUILDING 152 MAIN ROOM
3:40	Student Poster Awards			
4:00	Closing Remarks			

ORDER	POSTER PRESENTATIONS
POSTER SESSION I	Asteroid Populations and Meteorites
1	Shailyn Altepeter -- A Comparative Study of Bennu, B-Type Asteroids, and Itokawa with Implications for the OSIRIS-REx Mission
2	Jessie Dotson -- Albedos of Near Earth Asteroids
3	Lena Heffern -- GeMini-Plus: A high-resolution gamma-ray spectrometer for planetary composition measurements
4	Diane Wooden -- Near-Earth Asteroid 2010 GY6: How can an NEA be both dark and cool?
5	Elizabeth Sklute -- Optical Constants of Feldspar Minerals from Hapke Modelling
6	Timothy Glotch -- Thermal IR Spectroscopy of Tagish Lake as a Spectral Analog to Phobos
7	Mehmet Yesiltas -- Chemical composition of the Moss meteorite via FTIR and Raman spectroscopy
8	Kathryn Bryson -- Meteorite fractures and scaling for asteroid atmospheric entry
9	Daniel Ostrowski -- Physical properties of ordinary chondrites
10	Michael Demasi -- What do Meteorite Falls Tell Us about the Strength of Asteroid Boulders?
POSTER SESSION II	Mission Concepts, Training, and Instrumentation
11	Madhu Thangavelu -- PocketPadTM: Stowable, Expendable Landing Pad Concept for Dust and Ejecta Suppression for Extraterrestrial Lander Missions
12	Uland Wong -- Characterization of Stereo Vision Performance for Roving at the Lunar Poles
13	Douglas Currie -- On the Thermal Analysis of the Next Generation Retroreflector for Lunar and Astrophysical Science
14	Benjamin Mellinkoff -- Testing Remote Control of Teleoperated Rovers using Telerobotic Simulation System (TSS) in a Realistic Lunar Analog
15	Nathan Marx -- Design and Development of a Telerobotic Simulation System (TSS) for Remote Control of Rovers in a Realistic Lunar Analog
16	Bernard FOING -- Towards 2030 space economy: Cislunar and lunar infrastructure, Moon Village, Mars. asteroids and planetary missions as markets.
17	Robert MacDowall -- The Radio Observatory on the Lunar Surface for Solar Radio Studies
18	Madhu Thangavelu -- LUNAR SENTINEL : Short Warning, Emergency Response, Planetary Defense from the Moon
19	David Glenar -- Earthshine as an Illumination Source in Lunar Permanently Shadowed Regions
20	Angeliki Kapoglou -- Bringing the Moon Village Vision to Life - What Design can do.
POSTER SESSION III	Crew Health
21	Bernard FOING -- Moon Gait: Experiment Design
22	Bernard FOING -- EDEN-ISS: Human factors, performance, and safety aspects for food production in space exploration
23	Takashi Nakamura -- Solar Food Production and Life Support in Space Exploration
24	Linda Roehrborn -- Mars Games: Planning Infrastructure for Astronaut Mental Health and Morale
25	GIULIA ELLENA -- The effect of proprioceptive input modulation on visual perception and spatial representation in a simulated microgravitational
POSTER SESSION IV	Dust and the Exosphere
26	Kevin Chou -- Experimental Investigations on Dust Grain Charging within Dusty Surfaces
27	Tobin Munsat -- IMPACT Dust Accelerator Facility for Use by the Planetary Science Community
28	William Goode -- Hypervelocity Dust Trajectories Measured by the Dust Coordinate Sensor at IMPACT
29	Michael Zimmerman -- Grain-scale supercharging on the Moon and other airless bodies
30	Zach Ulibarri -- The Colorado Solar Wind Experiment
31	Timothy Stubbs -- Searching for Lunar Horizon Glow with the LRO Star Tracker Cameras
32	ROSEMARY Killen -- CORONAGRAPHIC OBSERVATIONS OF THE LUNAR SODIUM EXOSPHERE
33	Keenan Hunt-Stone -- Constraining lunar surface potential using measurements from the Apollo Charged Particle Lunar Environment Experiment
34	Anastasia Newheart -- Apollo ALSEP/SIDE Observations of Stairstep Flux Profiles in the Terrestrial Magnetotail
35	Andrew Poppe -- LADEE/LDEX Observations of Lunar Pickup Ion Distribution and Variability
POSTER SESSION V	Education and Public Outreach
36	Andrew Shaner -- ExMASS: An Open-Inquiry Research Experience for High School Students
37	BALBIR SINGH -- SPACE EDUCATION AND AWARENESS OF SPACE ACTIVITIES SCIENCES AMONG UNIVERSITIES AND SCIENTIFIC INSTITUTES.
38	Amalie Sinclair -- An Animated Model for Cultural Outreach and Engagement
39	Cassandra Runyon -- Increasing Access to Space Science
40	Lora Bleacher -- Update on Dynamic Response of Environments at Asteroids, the Moon and moons of Mars (DREAM2) Education Efforts
41	Andrea Jones -- RIS4E Science Journalism Program
42	Andrea jones -- FINESSE Spaceward Bound: An Immersive Field Experience for Teachers and Students
43	Everett Gibson -- Virtual Microscope Views of the Apollo 11, 12 and 14 Lunar Samples
POSTER SESSION VI	Restoration of Apollo Data
44	Seiichi Nagihara -- Availability of recently restored ALSEP data and metadata
45	Peter Chi -- Restored Apollo Magnetic Field Data and Their Values in Lunar Science and Exploration
46	David Williams -- Apollo Data Restoration at the Planetary Data System Lunar Data Node
POSTER SESSION VII	Volatiles
47	Yasvanth Poondla -- Modeling the LCROSS Impact Plume-Photodissociation and Sublimation of Water
48	Alessondra Springmann -- Thermal Release of Labile Elements from Primitive Meteorites: Applications for Asteroid Sample Return Science and ISRU
49	Angela Stickle -- Searching for water: Comparisons or LRO LAMP and Mini-RF datasets within Polar Anomalous Craters
50	Friedemann Freund -- Peroxy everywhere and what this means for Solid Body Exploration
POSTER SESSION VIII	In the Field and In the Lab- Analogue studies and standards
51	Scott Hughes -- Kings Bowl, Idaho â€" A planetary analog for lunar floor-fractured craters and pit crater chains
52	Jennifer Heldmann -- FINESSE: Field Investigations to Enable Solar System Science and Exploration
53	Joseph Minafra -- SSERVI Analogue Regolith Simulant Testbed
54	Melinda Dyar -- Cross-SSERVI Mineral and Glass Samples for Integrated Science
POSTER SESSION IX	Geology-Volcanism and Impacts
55	Mike Delmonaco -- Resolving the Primary Mechanism Causing Floor-Fractured Craters Using GRAIL and LOLA Data
56	Christopher DeMott -- Basalt Thickness of Mare Tranquillitatis Using Two Methods
57	Gennady Kochemasov -- Discovering lunar ripples with centimeter spacing
58	Mikala Garnier -- Excavation Depths as Indications of Magnesium Spinel Formation via Impact Melting
59	Andrew Nelson -- On the Hypervelocity Micrometeoroid Bombardment of Ice and Icy Regolith in the Laboratory
POSTER SESSION X	Geophysics and Geodynamics
60	Tess Caswell -- Characterizing the Physics of Tidal Dissipation in Icy Bodies
61	David Smith -- Understanding the relationship of degree-range and the depth of a gravity anomaly
62	Emmanuele Battista -- Relativistic and quantum gravity corrections to Lagrangian points for the Sun-Earth, Sun-Jupiter, and Earth-Moon systems.
POSTER SESSION XI	Remote Sensing
63	Angela Stickle -- Mini-RF and LROC Observations of Layering in Mare Craters
64	CJ Carey -- Identifying In-Situ Raman Spectra with Whole Spectrum Unmixing
65	Chae Kyung SIM -- Optical Maturity on the Walls of Lunar Craters
66	Nathan Smith -- Thermal Infrared Observations and Thermophysical Modeling of Phobos
67	Oleg Alexandrov -- Multi-view shape-from-shading for planetary images