
# HIGHLIGHTED ABSTRACTS —

** Asterisks denote speaker*

## Monday Morning, March 16, 2015

**RESULTS FROM RECENT LUNAR MISSIONS: LADEE, GRAIL, CHANG'E-3**
**Waterway Ballroom 1**

8:30 a.m. Cook A. M. * Wooden D. H. Colaprete A. Glenar D. A. Stubbs T. J.
*First Detection of Dust in the Lunar Tail: LADEE UVS Measurements* **[#2147]**
The LADEE UVS (Lunar Atmosphere and Dust Environment Explorer UV/Visible Spectrometer) Team presents the first evidence that the Moon's tail may contain dust.

8:45 a.m. Horanyi M. * Szalay J. Kempf S. Schmidt J. Gruen E. et al.
*LDEX Observation of the Dust Environment of the Moon* **[#1684]**
The talk will report on the analysis of the observations of Lunar Dust Experiment (LDEX) onboard the recently completed LADEE mission.

9:00 a.m. Stubbs T. J. * Glenar D. A. Wang Y. Sarantos M. Colaprete A. et al.
*Influence of Meteoroid Streams on the Lunar Environment: Results from LADEE* **[#2984]**
The meteoroid stream mass fluxes and ejecta production rates are estimated and compared with observations from the LADEE mission.

9:15 a.m. Colaprete A. * Wooden D. Cook A. Shirley M.
*An Examination of LADEE UVS Spectral Variability Associated with the Geminid Meteor Shower* **[#2364]**
UVS spectra taken at around the time of the Geminid meteor showers are compared, showing changes in some emission line strengths.

9:30 a.m. Hurley D. M. * Benna M. Cook J. C. Halekas J. S. Grava C. et al.
*Comparing LAMP Polar Measurements to LADEE Equatorial Measurements of Helium in the Lunar Exosphere* **[#2844]**
We compare three datasets relating to helium in the lunar exosphere. A model is used to interpret the spatial and temporal variability of lunar helium.

9:45 a.m. Matsumoto K. * Yamada R. Kikuchi F. Kamata S. Ishihara Y. et al.
*Internal Structure of the Moon Inferred from Apollo Seismic Data and Selenodetic Data from GRAIL and LLR* **[#1696]**
A lunar internal structure model from Apollo seismic data and the latest selenodetic data indicates at least 50-km-thick low-velocity zone above the CMB.

# *Monday Morning, March 16, 2015 (continued)*

**RESULTS FROM RECENT LUNAR MISSIONS: LADEE, GRAIL, CHANG'E-3 (continued)**
**Waterway Ballroom 1**

10:00 a.m. Milbury C. * Johnson B. C. Melosh H. J. Collins G. S. Blair D. M. et al.
*The Effect of Pre-Impact Porosity on the Gravity Signature of Lunar Craters* **[#1966]**
Impact modeling/Porosity, gravity/Mantle uplift, yes!

10:15 a.m. Kiefer W. S. * Macke R. J. Britt D. T. Irving A. J. Consolmagno G. J.
*The Density and Porosity of Lunar Impact Breccias and Impact Melt Rocks and Implications for GRAIL Gravity Modeling of the Orientale Impact Basin Structure* **[#1711]**
The measured densities of Apollo impact melt breccias provide an important context for interpreting GRAIL gravity observations of lunar impact basins.

10:30 a.m. Zuber M. T. * Smith D. E. Goossens S. J. Andrews-Hanna J. C. Head J. W. et al.
*Gravity Field of the Orientale Basin from the Gravity Recovery and Interior Laboratory (GRAIL) Mission* **[#1447]**
The Endgame mapping strategy was designed to provide highest-resolution coverage over the Orientale basin to yield a gravity map of a multi-ring impact basin.

10:45 a.m. Keane J. T. * Matsuyama I.
*Cleaning Up Degree-2: The Contribution of Impact Basins and Mascons to the Gravity Fields of the Moon, Mercury, and Other Terrestrial Planets* **[#2967]**
Impact basins and mascons complicate the degree-2 gravity fields of the Moon and Mercury, and obscure past histories of true polar wander.

11:00 a.m. Jozwiak L. M. * Head J. W. Neumann G. A. Wilson L.
*The Effect of Evolving Gas Distribution on Shallow Lunar Magmatic Intrusion Density: Implications for Gravity Anomalies* **[#1580]**
We assess how the evolution and loss of volatiles affects lunar shallow magmatic intrusion density and compare to GRAIL observations.

11:15 a.m. Sood R. * Chappaz L. Milbury C. Blair D. M. Melosh H. J. et al.
*Earhart: A Large, Previously Unknown Lunar Nearside Crater Revealed by GRAIL Gradiometry* **[#1883]**
GRAIL data applied to detect, characterize, and validate the presence of buried craters. Forward modeling supports the detection and validates their existence.

11:30 a.m. Goossens S. * Lemoine F. G. Sabaka T. J. Nicholas J. B. Mazarico E. et al.
*Global and Local Gravity Field Models of the Moon Using GRAIL Primary and Extended Mission Data* **[#1395]**
We present updated global and local gravity field models of the Moon using GRAIL data only.

11:45 a.m. Li H. * Li C. L. Liu J. J. Zhang H. B. Su Y. et al.
*The Chang'e 3 Mission: One Year Overview* **[#1732]**
Chang'e-3 has accomplished its yearlong nominal mission. We summarize preliminary results obtained by each science instrument as well as data accessibility.

## *Monday Morning, March 16, 2015 (continued)*

### SPECIAL SESSION: ROSETTA
### Waterway Ballroom 5

8:30 a.m. Mottola S. * Jaumann R. Schröder S. Arnold G. Grothues H. G. et al.
*Investigation of the First Touchdown Site on Comet 67P Derived from ROLIS High Resolution Imaging* **[#2308]**
The Agilkia landing site has been imaged by the ROLIS instrument during the Philae descent onto 67P. The properties of the surface regolith are discussed.

8:45 a.m. Wright I. P. * Andrews D. J. Barber S. J. Sheridan S. Morgan G. H. et al.
*First Measurements of the Surface Composition of 67P Using the Ptolemy Mass Spectrometer* **[#1970]**
Land, bounce, mass spectra/Land, bounce, land, stop holding breath/Loads of organics.

9:00 a.m. Bibring J.-P. Carter J. * Eng P. Gondet B. Jorda L. et al.
*First In Situ Observations of the Nucleus of 67P by Philae/CIVA-P* **[#2525]**
We shall present the first results derived from the CIVA images.

9:15 a.m. Ciarletti V. * Levasseur-Regourd A.-C. Lassue J. Statz C. Plettemeier D. et al.
*Revealing the Possible Existence of a Near-Surface Gradient in Local Properties of 67P/Churyumov-Gerasimenko Nucleus Through CONSERT Measurements* **[#2682]**
We show how CONSERT data acquired at grazing angles during a single Rosetta flyby can be used to characterize the local permittivity gradient of the nucleus.

9:30 a.m. Sierks H. *
*Nucleus Morphology and Activity of Comet 67P/Churyumov-Gerasimenko* **[#2194]**
The paper discusses the morphology and activity of the nucleus of Comet 67P/C-G.

9:45 a.m. Jäckel A. * Altwegg K. Balsiger H. Calmonte U. Gasc S. et al.
*Evolution of Cometary Activity at 67P/Churyumov-Gerasimenko as Seen by ROSINA/ROSETTA from Mid-November 2014 Until End of February 2015* **[#1702]**
We will discuss the evolution of the cometary activity of 67P/C-G from mid-November 2014 until end of February 2015 as seen with the ROSINA experiment.

10:00 a.m. Schindhelm E. R. * A'Hearn M. F. Bertaux J. L. Feaga L. M. Feldman P. D. et al.
*Investigating Ultraviolet Excitation Processes in 67P/Churyumov-Gerasimenko* **[#2189]**
We report analysis of far-UV spectra of coma emission of 67P/Churyumov-Gerasimenko taken by the Alice imaging spectrograph onboard the Rosetta spacecraft.

10:15 a.m. Hofstadter M. * von Allmen P. Lee S. Biver N. Bockelee-Morvan D. et al.
*Millimeter and Submillimeter Observations of Comet 67P/C-G with the MIRO Instrument* **[#2595]**
Millimeter and submillimeter observations of the comet are used to understand the physical processes that create the coupled nucleus-coma system.

10:30 a.m. Capaccioni F. * Bockelee-Morvan D. Filacchione G. Erard S. Leyrat C. et al.
*Water Vapour and Carbon Dioxide IR Emissions in 67P/CG Coma: First Detection by Rosetta/VIRTIS-M* **[#2494]**
The paper describes the detection of water vapor and carbon dioxide in the coma of 67P, and their spatial distribution as a function of altitude and local time.

## *Monday Morning, March 16, 2015 (continued)*

### SPECIAL SESSION: ROSETTA (continued)
### Waterway Ballroom 5

10:45 a.m. Hilchenbach M. Langevin Y. Engrand C. * Merouane S. Stenzel O. et al.
*In-Situ Cometary Particle Measurements in the Inner Coma of Comet 67P/Churyumov-Gerasimenko* **[#1936]**
Comet 67P/Churyumov-Gerasimenko has a dusty inner coma and particle morphology assembles agglomerates.

11:00 a.m. Fulle M. * Della Corte V. Rotundi A. Accolla M. Ferrari M. et al.
*Dust Measurements in the Coma of Comet 67P/Churyumov-Gerasimenko Inbound to the Sun Between 3.7 and 3.4 AU* **[#2420]**
GIADA and OSIRIS dust data, combined with data from MIRO and ROSINA instruments onboard Rosetta, from 3.7 to 3.4 AU inbound provide a dust/gas ratio of $4 \pm 2$.

11:15 a.m. Mandt K. E. * Burch J. L. Carr C. Eriksson A. I. Glassmeier K.-H. et al.
*First Results at 67P/Churyumov-Gerasimenko with the Rosetta Plasma Consortium* **[#2312]**
We will present a summary of both predicted and unexpected cometary plasma activity observations made by the five Rosetta Plasma Consortium (RPC) sensors.

11:30 a.m. A'Hearn M. F. * Feaga L. M.
*D/H and the Origin of Earth's Water* **[#2328]**
Measurements by ROSINA imply that 67P/ formed very cold. Thus JF comets formed in a much wider region, but one containing the formation of Oort cloud comets.

### MERCURY: SWING LOW, SWEET CHARIOT
### Waterway Ballroom 6

8:45 a.m. Mazarico E. * Genova A. Goossens S. Lemoine F. G. Smith D. E. et al.
*The Gravity Field of Mercury After the MESSENGER Low-Altitude Campaign* **[#1385]**
During its low-altitude gravity campaign, MESSENGER was tracked to altitudes down to 25 km. We present an updated, higher-resolution gravity field of Mercury.

9:00 a.m. Murchie S. L. * Klima R. L. Denevi B. W. Ernst C. M. Keller M. R. et al.
*Orbital Multispectral Mapping of Mercury by MESSENGER: Evidence for the Origins of Plains Units and Low-Reflectance Material* **[#1606]**
Orbital multispectral mapping of Mercury reveals stratigraphic relations of plains units and evidence for origin of low-reflectance material.

9:15 a.m. Lawrence D. J. * Feldman W. C. Nittler L. N. Peplowski P. N. Solomon S. C. et al.
*Global Maps of Mercury's Elemental Composition: New Results from Epithermal and Fast Neutrons* **[#1833]**
New maps of epithermal and fast neutrons across Mercury's northern hemisphere show hydrogen and average atomic mass compositional heterogeneities.

9:30 a.m. Frank E. A. * Nittler L. R. Vorburger A. H. Weider S. Z. Starr R. D. et al.
*High-Resolution Measurements of Mercury's Surface Composition with the MESSENGER X-Ray Spectrometer* **[#1949]**
We present updates to major-element maps of Mercury using low-orbit observations from MESSENGER's X-Ray Spectrometer.

## *Monday Morning, March 16, 2015 (continued)*

### MERCURY: SWING LOW, SWEET CHARIOT (continued)
### Waterway Ballroom 6

9:45 a.m. Chabot N. L. * Ernst C. M. Mazarico E. Neumann G. A. Denevi B. W. et al.
*Resolving the Surfaces of Mercury's Low-Reflectance Polar Deposits with Images from MESSENGER's Low-Altitude Campaign* **[#1274]**
Low-altitude images of Mercury's permanently shadowed craters provide new details on the surface morphology and evolution of the low-reflectance deposits.

## *Monday Afternoon, March 16, 2015*

### LUNAR VOLATILES
### Waterway Ballroom 1

2:30 p.m. Hui H. * Guan Y. Chen Y. Peslier A. H. Zhang Y. et al.
*SIMS Analysis of Water Abundance and Hydrogen Isotope in Lunar Highland Plagioclase* **[#1927]**
We have measured water concentrations and hydrogen isotope ratios in lunar highland plagioclase using SIMS.

2:45 p.m. Hauri E. H. * Saal A. E. Rutherford M. J. Van Orman J. A.
*Volatile Abundances in Apollo 12 Red Volcanic Glass* **[#2454]**
A12 red volcanic glass, together with other glass groups, show shifts in S/Dy at constant F/Nd that may be a signature of degassing of the lunar magma ocean.

3:00 p.m. Le Voyer M. * Hauri E. H. Saal A. E.
*Large Variations in the Volatile Content of Olivine-Hosted Melt Inclusions from Lunar Magmas* **[#2446]**
New volatile analyses of lunar melt inclusions from A17 orange glass extend the range to higher Cl, F, and S contents, and first document their C contents.

4:00 p.m. Lemelin M. * Lucey P. G. Greenhagen B. Paige D. A. Schorghofer N. et al.
*A Search for Transient Water Frost at the Lunar Poles Using the Lunar Orbiter Laser Altimeter* **[#1879]**
We search for areas that may "load" with surface frost during the lunar night causing increased reflectance, and unload during the day reducing the reflectance.

4:15 p.m. Teodoro L. F. A. * Lawrence D. J. Elphic R. C. Feldman W. C. Maurice S. et al.
*The Quest for a Diurnal Effect in Lunar Hydrogen Abundance* **[#1786]**
We will show that LPNS epithermal neutron count rates show diurnal variations that are correlated with variations in instrumental and subsurface temperatures.

4:30 p.m. McClanahan T. P. * Mitrofanov I. G. Boynton W. V. Chin G. Parsons A. et al.
*Epithermal Neutron Evidence for a Diurnal Surface Hydration Process in the Moon's High Latitudes* **[#2019]**
Epithermal neutron observations from the LRO's LEND detector is used to derive evidence of an active diurnal hydration process in the Moon's high latitudes.

## *Monday Afternoon, March 16, 2015 (continued)*

### MARS POLAR PROCESSES
### Waterway Ballroom 4

3:00 p.m. Losiak A. * Czechowski L. Velbel M. A.
*Ephemeral Liquid Water at the Surface of Martian North Polar Cap* **[#1428]**
During the warmest days of summer, water-ice located below a dust particle lying on the equatorial-facing slopes of the martian north polar cap can be melted.

## *Tuesday Morning, March 17, 2015*

### SPECIAL SESSION: HOW YOUNG IS YOUNG?
### Waterway Ballroom 1

9:15 a.m. McEwen A. * Daubar I. Ivanov B. Oberst J. Malhotra R. et al.
*Current Impact Rate on Earth, Moon, and Mars* **[#1854]**
Planets are getting whacked, but are the bolides mostly from asteroids or comets? Can new observations help us to date young surfaces?

9:30 a.m. Speyerer E. J. * Robinson M. S. Povilaitis R. Z. Wagner R. V.
*Dynamic Moon Revealed with High Resolution Temporal Imaging* **[#2325]**
Automated change detection of high resolution NAC images has led to the discovery of 225 new impact craters and nearly 26,000 other surface changes.

## *Wednesday Morning, March 18, 2015*

### LUNAR SAMPLES, PETROLOGY, AND GEOCHEMISTRY: LITTLE SLICES OF TRUTH AND BEYOND
### Waterway Ballroom 1

8:30 a.m. Kohl I. E. * Warren P. H. Young E. D.
*Earth and Moon are Indistinguishable in $\Delta^{17}O$ to Several Parts Per Million* **[#2867]**
Moon (BSM) and Earth (BSE) are indistinguishable in $\Delta^{17}O$ at the 2 ppm level; $-\Delta^{17}O$ values in a highland anorthositic troctolite show mass fractionation.

### SPECIAL SESSION: EARLY RESULTS FROM THE MAVEN MISSION I
### 8:30 a.m. Waterway Ballroom 5

8:30 a.m. Jakosky B. M. * Lin R. P. Grebowsky J. M. Luhmann J. G. MAVEN Science Team
*Early MAVEN Results on the Mars Upper Atmosphere and Atmospheric Loss to Space* **[#1370]**
Preliminary results will be presented from observations made during the spacecraft commissioning phase and from the first three months of science observations.

9:00 a.m. Eparvier F. G. * Thiemann E. M. B. Chamberlin P. C. Woods T. N.
*Solar EUV Irradiance at Mars: Why We're Measuring It and Why You Should Care* **[#3001]**
Solar EUV irradiance is highly variable and must be known to understand the variability of an atmosphere, in particular for the MAVEN mission to Mars.

## *Wednesday Morning, March 18, 2015 (continued)*

### SPECIAL SESSION: EARLY RESULTS FROM THE MAVEN MISSION I (continued)
### 8:30 a.m. Waterway Ballroom 5

9:15 a.m. Larson D. E. * Lillis R. J. Dunn P. A. Rahmati A. Cravens T. E. et al.
*The Solar Energetic Particle Experiment on MAVEN: First Results* **[#2890]**
We present first results from the MAVEN Solar Energetic Particle (SEP) Experiment and its relevance to understanding the loss of the martian atmosphere.

9:30 a.m. Halekas J. S. * Mitchell D. L. McFadden J. P. Larson D. Connerney J. E. P. et al.
*MAVEN Observations of the Martian Magnetosphere and Its Response to Solar Wind Drivers* **[#1379]**
We present the first observations of the structure and dynamics of the martian magnetosphere from MAVEN.

9:45 a.m. Mitchell D. L. * Mazelle C. McFadden J. P. Larson D. Halekas J. S. et al.
*MAVEN Observations of the Martian Ionosphere and Magnetosheath* **[#3015]**
MAVEN SWEA observations of the martian ionosphere and magnetosphere.

10:00 a.m. Mahaffy P. R. * Benna M. Elrod M. Bougher S. W. Yelle R. et al.
*Early Composition, Structure, and Isotope Measurements in the Upper Atmosphere of Mars from MAVEN's Neutral Gas and Ion Mass Spectrometer* **[#1981]**
First in situ measurements of upper atmospheric structure and composition from MAVEN's Neutral Gas and Ion Mass Spectrometer are reported.

10:15 a.m. Schneider N. M. McClintock W. E. Stewart A. I. F. Deighan J. * Clarke J. T. et al.
*First Results from MAVEN's Imaging UV Spectrograph* **[#2647]**
Early results from MAVEN's Imaging UV Spectrograph reveal a wealth of information about the atmosphere's structure, variability, and processes leading to escape.

10:30 a.m. Zurek R. W. * Tolson R. H. Bougher S. W. Baird D. Kass D. et al.
*Characterization of the Martian Thermosphere Using MAVEN Accelerometer and Reaction Wheel Datasets: Early Mission Results* **[#2039]**
Thermospheric density profiles are currently being derived using MAVEN reaction wheel and accelerometer data, including the first "deep dip" campaign.

10:45 a.m. Connerney J. E. P. * Espley J. Oliversen R. Sheppard D. Dibraccio G.
*First Results from the MAVEN Magnetic Field Investigation* **[#1080]**
Discussion of results of the MAVEN Magnetic Field Investigation (about Mars) acquired during the first few months in orbit, including Comet Siding Spring observations.

11:00 a.m. Andersson L. * Ergun R. E. Delory G. T. Morooka M. W. Fowler C. M. et al.
*Long Awaited Fundamental Measurement of the Martian Upper Atmosphere from the Langmuir Probe and Waves Instrument on the MAVEN Mission* **[#2337]**
Highlights from the LPW instrument: electron temperature profiles; nightside ionosphere structures; wave-particle interactions; and the dust.

11:15 a.m. McFadden J. P. * Livi R. Luhmann J. Connerney J. Mitchell D. et al.
*Structure of the Martian Ionosphere and Atmospheric Loss: MAVEN STATIC First Results* **[#2899]**
MAVEN STATIC provides the first detailed look at the martian ionosphere and the solar wind ionospheric interface where energization and loss mechanisms act.

## *Wednesday Morning, March 18, 2015 (continued)*

### SPECIAL SESSION: EARLY RESULTS FROM THE MAVEN MISSION I (continued)
### 8:30 a.m. Waterway Ballroom 5

11:30 a.m. Brain D. A. * Dong Y. Fortier K. Fang X. McFadden J. et al.
*MAVEN Measurements of the Ion Escape Rate from Mars* **[#2663]**
We provide an initial estimate of the loss rate of ions from the martian atmosphere based on the first several months of MAVEN data, and place them in context.

## *Wednesday Afternoon, March 18, 2015*

### SPECIAL SESSION: EARLY RESULTS FROM THE MAVEN MISSION II
### Waterway Ballroom 5

1:30 p.m. Chaffin M. S. * Chaufray J. Y. Deighan J. M. Schneider N. M. McClintock W. E. et al.
*H Escape at the Present Epoch* **[#2190]**
The first MAVEN observations of the extended H corona of Mars will be presented and discussed.

1:45 p.m. Clarke J. T. * Matta M. McClintock W. Schneider N. Deighan J. et al.
*Early Results from the MAVEN IUVS Echelle Channel* **[#2313]**
The MAVEN IUVS echelle channel is measuring the D/H ratio and O line strengths from the upper atmosphere of Mars. First results will be presented.

2:00 p.m. Lillis R. J. * Deighan J. L. Fox J. L. Bougher S. W. Lee Y. et al.
*Photochemical Escape of Oxygen from the Martian Atmosphere: First Results from MAVEN* **[#1568]**
Photochemical escape of oxygen is expected to be a significant channel for atmospheric escape. MAVEN's first measurements of escape fluxes are presented.

2:15 p.m. Leblanc F. * Lillis R. Curry S. Luhmann J. Modolo R. et al.
*MAVEN: Atmospheric Loss Induced by Sputtering* **[#1363]**
Based on MAVEN observations, we will describe our understanding of the sputtering of Mars' atmosphere and how it might contribute to its atmospheric loss.

2:30 p.m. Bougher S. W. * Tolson R. H. Mahaffy P. R. Johnston T. E. Olsen K. et al.
*Trends in Mars Thermospheric Density and Temperature Structure Obtained from MAVEN ACC/RW and NGIMS Datasets: Interpretation Using Global Models* **[#2062]**
MAVEN first results include in situ sampling of the Mars thermospheric structure at northern mid-to-high latitudes from both NGIMS and ACC/RW measurements.

2:45 p.m. Halekas J. S. * McFadden J. P. Luhmann J. G. Lillis R. J.
*Solar Wind or Houdini? Penetrating Protons Observed at Low Altitude by the MAVEN Solar Wind Ion Analyzer* **[#1381]**
We present MAVEN observations of a newly discovered population of solar wind protons that penetrate to low altitude by interacting with Mars' atmosphere.

3:00 p.m. Ma Y. J. Russell C. T. * Nagy A. F. Toth G. Halekas J. S. et al.
*MHD Model Results of Solar Wind Plasma Interaction with Mars and Comparison with MAVEN Observations* **[#1202]**
This study investigates in detail how plasma properties in Mars ionosphere are influenced locally by the crustal field and its rotation.

## *Wednesday Afternoon, March 18, 2015 (continued)*

### SPECIAL SESSION: EARLY RESULTS FROM THE MAVEN MISSION II (continued)
### Waterway Ballroom 5

3:15 p.m. Curry S. M. * Luhmann J. G. Dong C. F. Leblanc F. Modolo R. et al.
*MAVEN Data-Model Comparisons of Planetary Ions* **[#2389]**
We present comparisons of planetary pickup ions at Mars with MAVEN data to both validate the models and better constrain global atmospheric loss rates at Mars.

3:30 p.m. Crismani M. * Schneider N. Deigan J. Stewart I. Combi M. et al.
*Ultraviolet Observations of the Hydrogen Coma of Comet Siding Spring (C/2013 A1) by MAVEN/IUVS* **[#2462]**
After its arrival at Mars, MAVEN was serendipitously positioned to study the anticipated planet-grazing Comet C/2013 A1 and made useful scientific observations.

3:45 p.m. Schneider N. M. * Stewart A. I. F. McClintock W. E. Mahaffy P. R. Benna M. et al.
*MAVEN IUVS Observations of the Aftermath of Comet Siding Spring's Meteor Shower* **[#2804]**
The MAVEN spacecraft observed intense emission from vaporized dust in Mars' atmosphere following an intense meteor storm caused by Comet Siding Spring.

4:00 p.m. Jolitz R. D. * Lillis R. J. Curry S. M. Brain D. A. Larson D. L. et al.
*Atmospheric Effects of Energetic Particle Events Measured by MAVEN* **[#2657]**
We calculate effects on the martian upper atmosphere of solar energetic particle precipitation measured by the MAVEN SEP instrument.

4:15 p.m. DiBraccio G. A. * Espley J. R. Connerney J. E. P. Brain D. A. Halekas J. S. et al.
*MAVEN Observations of Magnetic Reconnection on the Dayside Martian Magnetosphere* **[#2125]**
Using MAVEN data, we investigate dayside reconnection by examining the interaction of the IMF with the induced ionospheric magnetic fields and crustal fields.

4:30 p.m. Lisse C. M. * CIOC Team
*Results from the CIOC Comet Siding Spring at Mars Observing Campaign* **[#2377]**
We present the CIOC-driven observing results, initiatives tried, and lessons learned for C/2013 A1 (Siding Spring) during its 2014 close flyby of Mars.

## *Friday Afternoon, March 20, 2015 (continued)*

### MINERALOGY MEASURED BY MISSIONS TO MARS
### Waterway Ballroom 4

3:30 p.m. Ruff S. W. *
*New Observations Reveal a Former Hot Spring Environment with High Habitability and Preservation Potential in Gusev Crater, Mars* **[#1613]**
Hot spring discharge channels at El Tatio, Chile, host microbial mats with sinter deposits that are remarkably similar to silica deposits next to Home Plate.