Friday, March 21, 2014 **[F554]**
FORMATION OF HABITABLE WORLDS
AND FATE OF HABITABLE ENVIRONMENTS
1:30 p.m. Waterway Ballroom 6

Chairs: **Alexander Pavlov**
Aaron Burton

1:30 p.m. Johnson T. V. * Mousis O. Lunine J. I. Madhusudhan N.
Exoplanet Habitability: Effects of Planetesimal Carbon Chemistry **[#1438]**
The amount of water available beyond the snow line in exoplanet systems depends on the host star's C/O in the circumstellar nebula.

1:45 p.m. Henderson B. L. * Gudipati M. S.
Two-Color MALDI-TOF Detection of Complex Organics in Electron-Irradiated Astrophysical Ice Analogs **[#2512]**
Bonds break, form, combine / Complexity from nothing / In the void of space..

2:00 p.m. Burton A. S. * Grunsfeld S. Elsila J. E. Glavin D. P. Dworkin J. P.
The Effects of Thermal Metamorphism on the Amino Acid Content of the CI-Like Chondrite Y-86029 **[#1394]**
The CI-like chondrite Y-86029 was found to be depleted in amino acids compared to other CI chondrites, likely due to metamorphism in the presence of water.

2:15 p.m. Chan H. S. * Chikaraishi Y. Takano Y. Ogawa N. O. Ohkouchi N.
Amino Acids in Carbonaceous Chondrites Yamato 980115 and Allan Hills A77003 **[#2114]**
Stable nitrogen-isotopic compositions of amino acids from CI1 Yamato 980115 and CO3 Allan Hills A77003 and the implications for their formation pathways.

2:30 p.m. Yabuta H. * Sakaiya T. Kondo T. Ohno S. Nakabayashi M. et al.
High Power Laser-Shock Experiment of Chondrites: Contribution of Impacts to the Early Earth Atmosphere **[#2457]**
A high power laser shock experiments of chondrites at 400 GPa were conducted. The produced volatiles included H_2, C_1–C_6 hydrocarbons, and S-bearing compounds.

2:45 p.m. Onyilagha J. C. * Trice K. Freeland S.
Further Investigation into the Biosynthetic Pathways of the 20 Standard Amino Acids of the Genetic Code **[#1875]**
The biosynthesis pathways of the 20 amino acids of the genetic code were investigated to provide more information into the origin of the standard genetic code.

3:00 p.m. Adcock C. T. * Hausrath E. M.
Reactive Transport Modeling of Phosphate Mineral Dissolution in High-P Martian Rocks **[#2250]**
Reactive transport modeling is applied to high-P martian rocks to gain insight into martian phosphate availability and the implications for potential life.

3:15 p.m. Gainey S. R. * Hausrath E. M. Hurowitz J. A. Tschauner O.
Formation of Aqueous Minerals: Implications for the Past Habitability of Mars **[#2356]**
Formation of aqueous minerals through the alteration of igneous rocks and its implications for the past habitability of Mars.

3:30 p.m. Thompson C. G. * Sobron P. Dixon M. A. Cabrol N.
Using Ion-Selective Optrodes to Characterize Water Chemistry in Extreme Environments **[#2205]**
Investigating the use of ion-selective optical sensors for characterizing biologically significant water chemistry in extreme environments.

3:45 p.m. Bultel B. B. * Quantin C. Q. Andréani M. A. Clénet H. C.
Deep Alteration of the Martian Crust: Insights from a Cross Section Between Hellas and Isidis Bassins **[#1710]**
We describe detections of phyllosilicates and carbonates in CRISM data by a new method of discrimination of minerals and we reconstruct a crustal cross-section.

4:00 p.m. Stern J. C. * Navarro-Gonzalez R. Freissinet C. McKay C. P. Archer P. D. Jr. et al.
Detection and Quantification of Nitrogen Compounds in the First Drilled Martian Solid Samples by the Sample Analysis at Mars (SAM) Instrument Suite on the Mars Science Laboratory (MSL) **[#2743]**
The SAM instrument suite on the Curiosity Rover detected both reduced and oxidized Ni-bearing compounds at Yellowknife Bay in Gale Crater.

4:15 p.m. Conrad P. G. * Malespin C. Franz H. Trainer M. G. Brunner A. et al.
SAM Measurements of Krypton and Xenon on Mars **[#2366]**
SAM has measured krypton and xenon in the atmosphere of Mars from the Curiosity rover using a semi-static operating mode of its quadrupole mass spectrometer.

4:30 p.m. Pavlov A. A. * Eigenbrode J. Glavin D. Floyd M.
Rapid Degradation of the Organic Molecules in Martian Surface Rocks Due to Exposure to Cosmic Rays. Severe Implications to the "Extinct" Life on Mars **[#2830]**
Organic molecules are degraded effectively by cosmic rays in the top few meters of the martian rocks. SiO_2 matrix greatly increases the rate of degradation.