Wednesday, April 26, 2017
POSTER SESSION III:
MISCELLANEOUS TOPICS IN ASTROBIOLOGY
7:00 p.m. Main Hall

Dooling D. Jr
Alien Autopsy: Fake Bodies, Real Science **[#3011]**
Students learn basic astrobiology as they dissect realistic ersatz bodies in a role-playing activity inspired by a NASA study and The Andromeda Strain.

Nuevo M. Cooper G. Sandford S. A.
Sugars and Sugar Derivatives in Residues Produced from the UV Irradiation of Astrophysical Ice Analogs **[#3043]**
This work describes the systematic search for sugars and sugar derivatives in laboratory residues produced from the UV irradiation of astrophysical ice analogs.

Byrne J. B.
A Classification Scheme for the Evolution of Technology Producing Exobiospheres **[#3069]**
This classification scheme for technology producing exobiospheres is based upon the organization of matter where intelligence functions as a chaotic attractor.

Materese C. K. Nuevo M. Sandford S. A.
The Formation of Nucleobases from the UV irradiation of Astrophysical Ice Analogs **[#3184]**
This work focuses on the formation of nucleobases from the UV irradiation of astrophysical ice analogs with an emphasis on the purines.

Nakanishi N. Martindale M. Q.
The Origin(s) and Early Evolution of Nervous Systems in Animals **[#3204]**
Recent and ongoing efforts to illuminate the origin and early evolution of nervous systems in animals will be discussed.

Kobayashi K. Mita H. Kebukawa Y. Nakagawa K. Ishiyama K. Aoki R. Harada T. Misawa S. Uchimura E. Sato T. Naito K. Minematsu S. Imai E. Yano H. Hashimoto H. Yokobori S. Yamagishi A.
Delivery of Extraterrestrial Amino Acids by Cosmic Dusts: Current State of Organic Exposure Experiment in the Tanpopo Mission **[#3254]**
Amino acids and their precursors were space exposed on Exposure Facility of ISS to evaluate the possible delivery of organics by cosmic dusts.

Wolf S. Elsaesser A. Quinn R. Mattioda A. Ricco A. Salama F. Kros A. Cottin H. Dartois E. d'Hendecourt L. Foing B. Martins Z. Sephton M. Spaans M.
OREOcube – ORganics Exposure in Orbit: In-Situ Spectroscopy of Organic Compounds on the International Space Station **[#3273]**
OREOcube is an exposure platform for the ISS and will measure, via in-situ UV-Vis-NIR spectroscopy, the photostability of organic molecules and biomarkers.

Matsubara T. Fujishima K. Saltikov C. W. Nakamura S. Rothschild L. J.
Characterization of Perchlorate-Resistant Halophilic and Halotolerant Microorganisms from Big Soda Lake, Nevada, USA **[#3309]**
We isolated perchlorate-resistant halophilic and halotolerant bacteria and compared the growth curves of them in the presence of perchlorate salts.

Mellon S. N. Mamajek E. E. Culver M. Stuik R. Kenworthy M. Bailey J. Dorval P. Crawford S. Lomberg B. B. D. Ireland M.
bRing: The Search for Circumplanetary Material around Beta Pictoris b **[#3321]**
We present bRing, a system of instruments designed to probe the upcoming Hill Sphere transit of Beta Pic b for circumplanetary dust.

Miller S. R. Sano E. B. Gallagher A. L.
Duplicated Recombination Genes in the Cyanobacterium Acaryochloris: Consequences for Genome Evolution **[#3323]**
We investigate the consequences of duplicated copies of the recombinase A (recA) gene for the dynamics of genome evolution in the cyanobacterium Acaryochloris.

Monfredini T. Wolff W. Boechat-Roberty H. M.
Photodestruction of PAHs in Planet-Forming Regions **[#3349]**
PAHs has been detected at circumstellar discs of T-Tauri stars. So, photon processed PAHs could be inherited by the forming planets at these discs.

Mancinelli R. L. Hauslage J. Richter P. Strauch S. Lebert M.
Does Gravity Affect Biogeochemical Cycles? The Eu:CROPIS: Euglena: Combined Regenerative Organic-Food Production in Space, Satellite Mission as an Example **[#3388]**
The Eu:CROPIS satellite mission's goal is to determine if gravity has an affect on nitrogen biogeochmical cycling using Microgravity, Moon/Mars gravity levels.

Siljeström S. Cottin H. Hilchenbach M. Fray N. Bardyn A. Briois C. Baklouti D. Engrand C. Langevin Y. Paquette J. Stenzel O. Kissel J. COSIMA Team
Comets as Carriers of Organic Material to Early Earth and Exoplanets — Insights from the COSIMA Instrument Onboard Rosetta **[#3414]**
Results from the COSIMA instrument onboard Rosetta will be presented and put in the context of development of early Earth and young exoplanets.

Berkowitz J.
Seeing the Future in the Past: Lessons from Astrobiology's Annus Mirabilis, 1957 **[#3505]**
In 1957 three scientific and technological events occurred that define astrobiology and have important lessons for its future prospects.

West S. Noviello J. L. Glaser S. Dibb S. Elkins-Tanton L. T. Shock E.
The Evolution of Habitability in Small Rocky Bodies **[#3588]**
Small, rocky bodies Zoom through space, bearing water Could life hide within?

Jackson R. L. Strausbaugh R.
Observations in the Near-Infrared for the Characterization of Extrasolar Atmospheres **[#3698]**
We are working on new methods for the characterization of exoplanetary atmospheres using the near-IR.

McCubbin F. M. Evans C. A. Fries M. D. Harrington A. D. Regberg A. B. Snead C. J. Zeigler R. A.
Advanced Curation Activities at NASA: Implications for Astrobiological Studies of Future Sample Collections **[#3713]**
This abstract discusses efforts that the NASA curation office is taking to prepare for sample return from astrobiologically significant locations.

Monkiewicz J. A. Kenworthy M. Klaaseen P. Mamajek E. E.
JVLA and ALMA Observations of the J1407b Exoring System **[#3730]**
In 2007 a large exoring system was detected via 54-day-long transit of 1SWASP J1407. We use JVLA and ALMA to confirm the system and measure the total dust mass.

Mumma M. J. Charnley S. B. Cordiner M. Villanueva G. L. DiSanti M. A. Paganini L.
The Relationship of HCN, C2H6, and H_2O in Comets: A Key Clue to Origins? **[#3716]**
We will present integrating themes that largely reconcile the seemingly divergent data on the volatile composition of comets.

Laine P. E.
Terahertz Remote Sensing of Extraterrestrial Biomarkers **[#3037]**
This paper presents some of the possibilities and challenges of using THz remote sensing to detect possible biomarkers in Mars or in the icy worlds.

Buessecker S. Tylor K. Nye J. Holbert K. E. Hartnett H. E. Glass J. B. Cadillo-Quiroz H.
Artefacts and Pitfalls of Sterilization Techniques to Assess Abiotic N_2O Production from Soil **[#3733]**
This abstract focuses on the application of sterilants for the investigation of abiotic production of N_2O from soil.