

Monday, July 27, 2009

SOIL CHEMISTRY: AQUEOUS PROCESSES ON EARTH AND MARS

1:00 p.m. Alumni Lounge

- 1:00 p.m. Tosca N. J. *
[*The Chemistry of Martian Water After ~3 Gyr of Planetary Evolution*](#) [#8025]
- 1:15 p.m. Des Marais D. J. *
[*Potential Lifestyles in Ancient Environments Characterized by the Mars Exploration Rovers*](#) [#8031]
- 1:30 p.m. Bao H. *
[*Isotopic Analysis of Salts in Terrestrial Hyper-Arid Deserts: Analogs for Understanding the Origin and Mobility of Salts on Mars*](#) [#8028]
- 1:45 p.m. Chadwick O. A. * Amudson R.
[*Desert Soils and Mars*](#) [#8029]
- 2:00 p.m. Niles P. B. * Michalski J.
[*Closed System Chemistry Inside Massive Ice Deposits at Meridiani Planum*](#) [#8013]
- 2:15 p.m. **Moderated Panel Discussion**
- 2:45 p.m. BREAK

Monday, July 27, 2009

PERCHLORATE: VOLATILES AND PHOTOCHEMISTRY

3:00 p.m. Alumni Lounge

- 3:00 p.m. Catling D. C. * Claire M. W. Zahnle K. J. Quinn R. C. Clark B. C.
Hecht M. H. Kounaves S. P.
[Perchlorate Origins in the Atacama and on Mars](#) [#8021]
- 3:15 p.m. Chevrier V. F. * Hanley J.
[Thermodynamic Properties of Oxidized Forms of Chloride and Applications to the Phoenix Surface Chemistry](#) [#8009]
- 3:30 p.m. Hanley J. * Chevrier V. F.
[Hydrous Perchlorates and Their Relation to Humidity at the Phoenix Landing Site](#) [#8008]
- 3:45 p.m. Rivera-Valentin E. G. Chevrier V. F. *
[Time Dependent Model for Water Vapor Diffusion/Adsorption and Heat Transfer at the Phoenix Landing Site](#) [#8016]
- 4:00 p.m. **Moderated Panel Discussion**
- 4:30 p.m. **Wrap Up: The Big Questions, Part I**
- 5:00 p.m. Adjourn

Tuesday, July 28, 2009
INTRODUCTION
8:30 a.m. Alumni Lounge

8:30 a.m. Update, Workshop Logistics, and Agenda

ASTROBIOLOGY

- 8:45 a.m. Coleman M. *
[*Perchlorate on Earth and Mars, Formation Processes, Fate, Implications for Astrobiology and Suggestions for Future Work*](#) [#8024]
- 9:00 a.m. Aubrey A. D. * Parker E. T. Grunthaner F. J. Bada J. L.
[*Implications of the Presence of Surface Perchlorate for In Situ Detection of Organic Compounds During Future Missions*](#) [#8005]
- 9:15 a.m. Howe K. L. Gavin P. Kral T. A. Goodhart T. Chevrier V. *
[*Methanogen Growth in Perchlorate-supplemented Media and Implications for Life in Phoenix-Type Soils*](#) [#8014]
- 9:30 a.m. Sun H. J. *
[*Substrate Stereo Selectivity may be Used to Distinguish Between Chemical and Biological Reactivity on Mars*](#) [#8022]
- 9:45 a.m. **Moderated Panel Discussion**
- 10:15 a.m. BREAK

Tuesday, July 28, 2009
FUTURE MISSIONS AND EXPERIMENTS
10:30 a.m. Alumni Lounge

- 10:30 a.m. Blake D. F. * Bish D. L. Chipera S. J. Vaniman D. T. Sarrazin P. CheMin Team
[*In Situ Analysis of Hydrous and Aqueous Minerals Using the CheMin Mineralogical Instrument on Mars Science Laboratory*](#) [#8026]
- 10:45 a.m. Dyar M. D. * Tucker J. M. Clegg S. M. Schaefer M. W. Wiens R. C. Barefield J. E. II.
[*Probing Martian Surface Chemistry with LIBS: Major and Minor Element Analyses with Laser-induced Breakdown Spectroscopy*](#) [#8019]
- 11:00 a.m. Grady M. M. * Tomkinson T. Wolters S. D. Guthery W. Bohman A. F. Sund A. T.
[*WATSEN — A Mid-IR Spectrometer, Humidity Sensor and Optical Microscope to Identify the Subsurface Water and Mineralogy of Mars*](#) [#8012]
- 11:15 a.m. **Moderated Panel Discussion**
- 11:45 a.m. **Wrap Up: The Big Questions, Part II**
- 12:15 p.m. LUNCH

Tuesday, July 28, 2009
WORKING SESSIONS – BREAKOUT AND WRAP UP
1:30 p.m. Alumni Lounge

- 1:30 p.m. Breakout Groups
- 2:30 p.m. BREAK
- 2:45 p.m. Breakout Group Reports: Group Leaders
- 3:15 p.m. Strategy for Future Exploration: Moderator (Hecht)
- 4:15 p.m. Planning for MEPAG and White Paper: Moderator (Kounaves)
- 5:00 p.m. Adjourn

POSTER DISPLAY
Alumni Lounge

*The following presentations will be available as poster displays
(with no formal poster session) at the workshop*

Berger G. Meunier A.

[*The Out-Gassing of a Basalt Flow as a Source of Martian Phyllosilicate*](#) [#8001]

Hanley J. Chevrier V. F. Davis B. L. Altheide T. S. Francis A.

[*Reflectance Spectra of Low-Temperature Chloride and Perchlorate Hydrates and Their Relevance to the Martian Surface*](#) [#8010]

Richardson C. D. Hinman N. W. Kotler J. M. McJunkin T. R. Scott J. R.

[*Influence of Geochemistry on Detection of Bio/Organic Signatures*](#) [#8017]

Tomkinson T. Needham A. W. Grady M. M. Hagermann A. Wright I. P.

[*Understanding the Evolution of Martian Carbonates from a Combined Modelling and Synthesis Study*](#) [#8011]

PRINT ONLY

Litvak M. L. Demidov N. E. Mitrofanov I. G.

Elemental Composition and Hydration of Martian Regolith Based on Gamma and Neutron Spectroscopy Data [#8002]