



July 14-18, 2014
Pasadena, California

The Eighth International Conference on Mars

Three types of summary presentations from the 8th Mars Conference are being made available. Our purpose is first to convey a high-level understanding of the current state of Mars science to scientists who were not able to attend the meeting, and second to provide a set of reference materials that can be used to assemble lectures and other kinds of presentations, particularly for academia. For researchers interested in following up on specifics, the conference output additionally includes the abstracts, and a subset of the posters for which the authors agreed to have their files posted. Included here are the summary talks given by the invited speakers of each conference session, overviews of five upcoming Mars missions, and the synthesis put together by the conference “Integrators” and that formed the basis of the discussion during the conference’s concluding session.

If you have any questions, please contact serina.diniega@jpl.nasa.gov.

INTRODUCTION PRESENTATION

Beatty D.

[Introduction Presentation](#)

SYNTHESIS PRESENTATION

Pratt L. Christensen P. Zurek R. Des Marais D. Coradini M.

[Synthesis Presentation](#)

SESSION INVITED TALKS

THE BIG PICTURE

Tanaka K. L. * Skinner J. A. Jr. Fortezzo C. M. Hare T. M. Irwin R. P. III Platz T. Michael G. Dohm J. M. Kolb E. J. Robbins S. J.

[The ‘New’ Geology of Mars: Top Ten Results of Post-Viking Global Mapping and Crater-Dating](#) [\[#1087\]](#)

MARS AS AN IGNEOUS SYSTEM

Grott M. *

[Mars as an Igneous System: Our Changing View from Orbit, Ground, Meteorite](#) [\[#1186\]](#)

Agee C. B. *

[Black Beauty: Unique Martian Meteorite — A Match for Average Martian Crust](#) [\[#1173\]](#)

MARS FIRST BILLION YEARS

Ehlmann B. L. *
[The First Billion Years — Warm and Wet vs. Cold and Icy?](#) [#1245]

Mangold N. *
[Did Fluvial Landforms Form Under A Warmer Early Mars?](#) [#1146]

Haberle R. M. *
[Mars: The First Billion Years — Warm and Wet vs. Cold and Icy?](#) [#1270]

ROVER-SCALE GEOLOGY AND ORGANICS

Des Marais D. J. *
[Concepts of Life in the Contexts of Mars](#) [#1467]

Grotzinger J. P. *
[Habitability, Organic Taphonomy, and the Sedimentary Record of Mars](#) [#1175]

AMAZONIAN CLIMATE AND ICE CAPS

Forget F. *
[What does Obliquity do to the Climate?](#) [#1318]

Holt J. W. *
[The Long-Term Evolution of Planem Boreum, Mars: A Synthesis of Recent Observations and Modeling](#) [#1167]

MODERN, DYNAMIC MARS

McEwen A. S. *
[Active Modern Mars: What is Happening on the Surface Today?](#) [#1147]

Heavens N. G. *
[The Meteorology of Dust and Water on Mars: Insights from the Recent Past and New Challenges](#) [#1072]

MISSION PRESENTATIONS

Jakosky B. *
[The MAVEN Mission to Mars: Exploring Mars' Climate History](#) [#1330]

Witasse O. Vago J. L. * Rodionov D. S. ExoMars 2016 Principal Investigator Team
[The ESA-Roscosmos ExoMars 2016 Mission: A Status Report](#) [#1232]

Smrekar S. Banerdt B.
[Insight](#)

Vago J. L. * Rodionov D. S. Witasse O. Kminek G. Lorenzoni L. Landing Site Selection Working Group
ExoMars Team
[ExoMars Status and Landing Site Selection](#) [#1105]

Farley K. Schulte M.
[Update on the Mars 2020 Mission](#)