

Tuesday, March 13, 2007

SPECIAL SESSION:

MARS RECONNAISSANCE ORBITER: NEW WAYS OF STUDYING THE RED PLANET

8:30 a.m., Crystal Ballroom A

Chairs: S. E. Smrekar
W. M. Calvin

- 8:30 a.m. Smrekar S. E. * Zurek R. W. Keating G. M. Malin M. C. McCleese D. J. McEwen A. S. Murchie S. L. Phillips R. J. Seu R. Zuber M. T.
Mars Reconnaissance Orbiter's First Look at Mars [#2126]
This abstract highlights the initial science results from the six instruments and two facility science investigations on the Mars Reconnaissance Orbiter. All instruments are currently producing excellent data, with over three Tb returned since November.
- 8:45 a.m. McEwen A. S. * HiRISE Team
HiRISE Observations of Mars [#2031]
HiRISE is sampling martian terrains at 25–32 cm/pixel scale, revealing many new details relevant to understanding the geologic and climate history of Mars.
- 9:00 a.m. Malin M. C. Bell J. F. III Calvin W. M. * Cantor B. A. Clancy R. T. Edgett K. S. Edwards L. Haberle R. M. James P. B. Lee S. W. Thomas P. C. Wolff M. J.
Initial Observations by the MRO Mars Color Imager and Context Camera [#2068]
MARCI has two ultraviolet and five visible channels and CTX has spatial resolution nearly equivalent to MOC. Some examples of our initial observations in atmospheric, polar and geologic processes are briefly summarized.
- 9:15 a.m. Murchie S. * CRISM Science and Engineering Teams
First Results from the Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) [#1472]
The Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) is a hyperspectral imager on the MRO spacecraft. Early activities have included global multispectral mapping, and 192 targeted observations through 1 Jan 2007.
- 9:30 a.m. McCleese D. J. * Schofield J. T. Aharonson O. Calcutt S. B. Irwin P. Ivanov A. B. Kass D. M. Leovy C. B. Lewis S. Paige D. A. Read P. L. Richardson M. I. Taylor F. W. Zurek R. W.
Observations of the South Polar Atmosphere and Condensates: Early Results from the Mars Climate Sounder [#1413]
MCS observes the martian atmosphere and surface. This paper focuses on studies of the thermal structure, clouds, and hazes in the winter south polar regions, as well as high altitude clouds at mid-latitudes.
- 9:45 a.m. Seu R. * Phillips R. Picardi G. Biccari D. Federico C. Marinangeli L. Orosei R. Pettinelli E. Frigeri A. Masdea A. Giacomoni E. Cutigni M. Provenziani M. Fois F. Mecozzi R. Flamini E.
Overview of the Martian Subsurface Structures as Seen by SHARAD [#1878]
Here we present first promising results of SHARAD (SHALLOW RADAR), the subsurface sounding radar provided by the Italian Space Agency as a Facility Instrument to NASA's 2005 Mars Reconnaissance Orbiter.
- 10:00 a.m. Zuber M. T. * Lemoine F. G. Smith D. E. Konopliv A. S. Smrekar S. E. Asmar S. W. Mazarico E. M.
Preliminary Results from the Mars Reconnaissance Orbiter Radio Science Gravity Investigation [#1461]
The Radio Science Gravity investigation on MRO utilizes the spacecraft's telecom system to address scientific questions regarding solid and volatile parts of the planet.

- 10:15 a.m. Keating G. M. * Bougher S. W. Theriot M. E. Tolson R. H. Zurek R. W. Blanchard R. C. Murphy J. R. Bertaux J. -L.
Mars Neutral Upper Atmosphere Temporal and Spatial Variations Discovered from the Accelerometer Science Experiment Aboard Mars Reconnaissance Orbiter [#2074]
Mars upper atmospheric variations discovered from MRO accelerometer experiment including 11-year solar activity variations are discussed.
- 10:30 a.m. Golombek M. P. * Arvidson R. E. Heet T. Barry L. Matijevic J. R. McEwen A. S.
Size-frequency Distributions of Rocks on the Northern Plains of Mars in HiRISE Images with Special Reference to Phoenix Landing Sites [#1405]
Rock size-frequency distributions from HiRISE images of the northern plains follow exponential models for diameters >1.5 m, are continuous with those from VL2, and those with <10% rock coverage have a high probability of success for landing Phoenix.
- 10:45 a.m. Seelos K. D. * Seelos F. P. Murchie S. L. Arvidson R. E. CRISM Team
CRISM Observations of Candidate Landing Sites for the 2007 Phoenix Mission [#2377]
Early MRO PSP multispectral and targeted CRISM observations of the candidate Phoenix landing sites in the northern plains of Mars will be presented with emphasis on the detection of small patches of surface ice.
- 11:00 a.m. Grant J. A. * Glotch T. D. Grotzinger J. P. Irwin R. P. III McEwen A. S. Milliken R. E. Tornabene L. L. Weitz C. M. HiRISE Team
Stratigraphy in Holden Crater as Revealed by HiRISE [#1435]
HiRISE images of Holden Crater in southwest Margaritifer Terra, Mars, reveal outcroppings of mega-breccia of likely impact origin overlain by sediments deposited during two Noachian-era lacustrine phases.
- 11:15 a.m. Mustard J. F. * Murchie S. L. Ehlmann B. L. Pelkey S. M. Roach L. A. Seelos F. Poulet F. Bibring J.-P. Mangold N. Grant J. A. Milliken R. E. CRISM Science Team
CRISM-OMEGA Observations of Phyllosilicate-Olivine Stratigraphy in Nili Fossae, Mars [#2071]
OMEGA, HiRISE and CRISM coordinated observations are used to investigate the nature of aqueous alteration in the Nili Fossae region. Phyllosilicate minerals are found in the basement materials predating the emplacement of olivine-bearing lithologies.
- 11:30 a.m. Bibring J. -P. * Loizeau D. Pelkey S. M. Murchie S. Mustard J. F. Bishop J. Ehlmann B. L. Gondet B. Mangold N. Poulet F. Roach L. H. Seelos F. OMEGA Team CRISM Science Team
Coupled OMEGA-CRISM Observations of Marwth Vallis [#2160]
OMEGA has discovered hydrated phyllosilicates around Marwth Vallis, confirmed at higher spatial resolution by CRISM. Joined analyses will be presented, and discussed in the framework of Mars early habitability.