

Wednesday, March 16, 2005
MER RESULTS I
8:30 a.m. Salon B

Chairs: J. R. Johnson
R. E. Arvidson

- 8:30 a.m. Squyres S. W. * Athena Science Team
Recent Results from the Spirit Mars Exploration Rover Mission [#1918]
 This abstract is one of two overview abstracts describing recent results from the Mars Exploration Rover mission. The focus of this abstract is Spirit's exploration of the Columbia Hills.
- 8:45 a.m. Arvidson R. E. * Squyres S. W. Malin M. C. Poulet F. Bibring J.-P. Langevin Y. Gondet B. Athena Science Teams OMEGA Science Team
Recent Results from the Opportunity Mars Exploration Rover Mission [#1958]
 The Opportunity rover undertook an extensive campaign of observations at the site of the heat shield impact, both to characterize the shield itself and to examine the shallow subsurface materials excavated by the impact.
- 9:00 a.m. Bell J. F. III* Arneson H. M. Farrand W. H. Goetz W. Hayes A. G. Herkenhoff K. E. Johnson M. J. Johnson J. R. Joseph J. Kinch K. M. Lemmon M. T. Madsen M. B. McCartney E. Morris R. V. Proton J. Savransky D. Seelos F. Soderblom J. Sohl-Dickstein J. N. Sullivan R. J. Wolff M. J. Athena Science Team
Large Multispectral and Albedo Panoramas Acquired by the Pancam Instruments on the Mars Exploration Rovers Spirit and Opportunity [#1337]
 The Mars Exploration Rover Pancam instruments have acquired dozens of very large color and "albedo" panoramas during their missions. This abstract summarizes these data products and briefly describes their scientific utility.
- 9:15 a.m. Christensen P. R. * Wyatt M. B. Glotch T. D. Rogers A. D. Anwar S. Arvidson R. E. Bandfield J. L. Blaney D. L. Budney C. Calvin W. M. Fallacaro A. Ferguson R. L. Gorelick N. Graff T. Hamilton V. E. Hayes A. G. Johnson J. R. Knudson A. T. McSween H. Y. Jr. Mehall G. L. Mehall L. K. Moersch J. E. Morris R. V. Smith M. D. Squyres S. W. Ruff S. W. Wolff M. J.
Mineral Composition and Abundance of the Rocks and Soils at Gusev and Meridiani from the Mars Exploration Rover Mini-TES Instruments [#1276]
 Mini-TES has identified Mg and Ca sulfates and high-silica minerals in the Meridiani outcrops. Spherules are dominantly hematite. Plagioclase/pyroxene/olivine sands occur at both sites. Bounce Rock is a pyroxene-dominated basalt similar to EET79001.
- 9:30 a.m. Herkenhoff K. E. * Squyres S. Arvidson R. E. Bass D. Bell J. F. III Bertelsen P. Cabrol N. A. Ehlmann B. L. Farrand W. H. Gaddis L. R. Greeley R. Grotzinger J. P. Hayes A. Hviid S. F. Johnson J. R. Jolliff B. L. Kinch K. M. Knoll A. H. Lemmon M. T. Madsen M. Maki J. N. McLennan S. M. Ming D. W. Morris R. Rice J. Richter L. Sims M. Smith P. Soderblom L. Spanovich N. Sullivan R. Weitz C.
Overview of Athena Microscopic Imager Results [#1778]
 The Athena Microscopic Imagers on the Mars Exploration Rovers continue to obtain excellent data.
- 9:45 a.m. Gellert R. * Zipfel J. Brückner J. Dreibus G. Lugmair G. W. Rieder R. Wänke H. Klingelhöfer G. Clark B. C. Ming D. W. Yen A. Squyres S. Athena Science Team
Results of the Alpha-Particle-X-Ray Spectrometer on Board of the Mars Exploration Rovers [#1997]
 We report results of APXS analyses acquired during the MER missions. The chemical compositions of soils, rocks and outcrops provide evidence for evaporate rich sediments and alteration of igneous rocks under aqueous conditions.

- 10:00 a.m. Klingelhöfer G. * Rodionov D. S. Morris R. V. Schröder C. de Souza P. A. Jr. Ming D. W. Yen A. S. Bernhardt B. Renz F. Fleischer I. Wdowiak T. Squyres S. W.
Athena Science Team
MIMOS II on MER — One Year of Mössbauer Spectroscopy on the Surface of Mars: From Jarosite at Meridiani Planum to Goethite at Gusev Crater [#2349]
The miniaturized Mössbauer spectrometer MIMOS II is part of payload of the Mars Exploration Rovers Spirit and Opportunity, performing successfully during first year of operation. A summary of the results will be given.
- 10:15 a.m. Madsen M. B. * Arneson H. M. Bertelsen P. Bell J. F. III Binau C. S. Gellert R. Goetz W. Gunnlaugsson H. P. Herkenhoff K. E. Hviid S. F. Johnson J. R. Johnson M. J. Kinch K. M. Klingelhöfer G. Knudsen J. M. Leer K. Madsen D. E. McCartney E. Merrison J. Ming D. W. Morris R. V. Olsen M. Proton J. B. Rodionov D. Sims M. Squyres S. W. Wdowiak T. Yen A. S.
An Update on Results from the Magnetic Properties Experiments on the Mars Exploration Rovers, Spirit and Opportunity [#2379]
We show how the magnetic properties experiments on Spirit and Opportunity provide information on the distribution of magnetic minerals in the dust on Mars, with emphasis on results from Opportunity.
- 10:30 a.m. Bartlett P. W. * Carlson L. E. Chu P. C. Davis K. R. Gorevan S. Kusack A. G. Myrick T. M. Wilson J. J.
Summary of Rock Abrasion Tool (RAT) Results Pertinent to the Mars Exploration Rover Science Data Set [#2292]
The Rock Abrasion Tool (RAT) serves as the sample preparation device on the Mars Exploration Rover payload, grinding a circular spot on the order of millimeters deep into a rock face to remove surface layers, preparing the rock for observation.
- 10:45 a.m. Farrand W. H. * Bell J. F. III Johnson J. R. Clark B. C. Joliff B. L.
Visible/Near Infrared Spectral Characterization of In Situ Rock Outcrops at Meridiani Planum as Observed by the Mars Exploration Rover Opportunity [#2082]
Multispectral observations by the Mars Exploration Rover Opportunity's Pancam are used to characterize spectral variability among the layered rock outcrops examined by the rover. The use of this VNIR spectral data to aid in stratigraphic analysis of the rock outcrops is also described.
- 11:00 a.m. Johnson J. R. * Arvidson R. E. Bell J. F. III Farrand W. H. Guinness E. A. Johnson M. J. Herkenhoff K. E. Lemmon M. T. Morris R. V. Seelos F. IV Soderblom J. Soderblom L. Squyres S. Wolff M. Athena Science Team
Photometric Observations of Soils and Rocks at the Mars Exploration Rover Landing Sites [#1815]
The MER Pancams have acquired multispectral reflectance observations of rocks and soils at different incidence, emission, and phase angles that will be used for photometric modeling of surface materials.
- 11:15 a.m. Clark B. C. * McLennan S. M. Morris R. V. Gellert R. Joliff B. L. Knoll A. H. Lowenstein T. K. Ming D. W. Tosca N. J. Christensen P. R. Yen A. Brückner J. Calvin W. M. Farrand W. H. Zipfel J. Gorevan S. Squyres S. W.
Results and Implications of Mineralogical Models for Chemical Sediments at Meridiani Planum [#1446]
Outcrops of salt-rich silicic sediments at Meridiani Planum were analyzed using sample preparation via grinding to reveal rock interiors. X-ray fluorescence and Mössbauer analysis are combined with IR spectroscopy to infer mineral composition.
- 11:30 a.m. Morris R. V. * Ming D. W. Clark B. C. Klingelhöfer G. Gellert R. Rodionov D. Schroeder C. de Souza P. A. Yen A. Athena Science Team
Abundance and Speciation of Water and Sulfate at Gusev Crater and Meridiani Planum [#2239]
Combined Mössbauer and APXS data have been used to determine the abundance and speciation of water and sulfate at Gusev crater and Meridiani Planum. The Meridiani outcrop is estimated to have about 7 wt% water equivalent.