

Monday, March 13, 2006
MARS EXPRESS: PROBING THE DEPTHS
8:30 a.m. Crystal Ballroom B

Chairs: J. J. Plaut
A. F. Chicarro

- 8:30 a.m. Chicarro A. F. *
Mars Express Scientific Overview After One Martian Year in Orbit [#1061]
 A scientific overview of the consolidated results from all seven experiments onboard the ESA Mars Express spacecraft after more than one Martian year in orbit is given.
- 8:45 a.m. Plaut J. J. * Picardi G. Cicchetti A. Clifford S. Edenhofer P. Farrell W. Federico C. Frigeri A. Heggy E. Herique A. Ivanov A. Jordan R. Kofman W. Leuschen C. Marinangeli L. Nielsen E. Ori G. Orosei R. Pettinelli E. Phillips R. Plettemeier D. Safaeinili A. Seu R. Stofan E. Vannaroni G. Watters T. Williams I.
MARSIS Subsurface Sounding Observations of the South Polar Layered Deposits of Mars [#1212]
 MARSIS on Mars Express has observed the south polar layered deposits with subsurface sounding radar. The radar penetrates to the base of the deposits and detects multiple internal layers.
- 9:00 a.m. Watters T. R. * Leuschen C. J. Plaut J. J. Picardi G. Safaeinili A. Clifford S. M. Farrell W. M. Ivanov A. B. Phillips R. J. Stofan E. R.
Evidence of Buried Basins in the Northern Lowlands of Mars from the MARSIS Radar Sounder [#1693]
 The Mars Advanced Radar for Subsurface and Ionospheric Sounding (MARSIS) has returned the first subsurface data on the shallow crust in northern lowlands. MARSIS has revealed buried impact basins in the northern lowlands with little or no surface expression.
- 9:15 a.m. Ivanov A. B. * Safaeinili A. Picardi G. Plaut J. J.
Observations of the "Stealth" Radar Feature in the Mars Express MARSIS Investigation [#1946]
 We will present the latest observations of the "Stealth" radar feature by the MARSIS radar.
- 9:30 a.m. Neukum G. * Basilevsky A. T. van Gasselt S. Greeley R. Hauber E. Head J. W. Hoffmann H. Ivanov B. A. Jaumann R. McCord T. B. Preuschmann S. Werner S. Williams D. A. Wolf U. HRSC Co-Investigator Team
New Insights into the Geological Evolution of Mars Through the Mars Express High Resolution Stereo Camera (HRSC) [#2379]
 Mars fell dry on a global scale by 3.5 Ga ago, but there has been episodic volcanic, hydrothermal, fluvial, and glacial activity throughout the whole history of Mars though declining in magnitude through time in the past, becoming confined more and more to certain regions or locales.
- 9:45 a.m. McCord T. B. * Adams J. B. Hansen G. B. Combe J.-P. Bellucci G. Jaumann R. Neukum G. Poulet F. Gillespie A. R.
Mars Surface Compositional Units from the Mars Express High Resolution Stereo Camera [#1757]
 Mars Express HRSC color data are used to define and map compositional units. These maps suggest there are only a few basic units for most of the surface but their distributions require revising some existing geologic maps and interpretations.

- 10:00 a.m. Pinet P. C. * Jehl A. Cord A. Daydou Y. D. Baratoux D. Chevrel S. C. Manaud N. Greeley R. Hoffmann H. Gwinner K. Scholten F. Roatsch T. Jaumann R. Neukum G. Bell J. F. Arvidson R. E. Johnson J. R. Squyres S. W. Mars Express HRSC Co-Investigator Team MER Science Team
Mars Express/HRSC Imaging Photometry and MER Spirit/PANCAM In Situ Spectrophotometry Within Gusev [#1220]
High resolution (100 m/pixel) mapping of surface physical properties derived from orbital HRSC multi-angular observations reveals different behaviours for the Columbia Hills and Plains materials in Gusev, complementing *in situ* Spirit observations.
- 10:15 a.m. Bibring J.-P. * Langevin Y. Poulet F. Gondet B. Gendrin A. Mustard J. Mangold N. Arvidson R. OMEGA Science Team
The Mars History Derived from the Mineralogical Data of OMEGA/MEx Acquired During the First Martian Year of Operations [#2276]
The OMEGA mineralogical data acquired so far enable to describe the global Mars history in three eras, characterized by the formation of phyllosilicates first, followed by that of sulfates in an acidic environment, and finally the formation of anhydrous ferric oxides.
- 10:30 a.m. Gendrin A. * Bibring J.-P. Quantin C. Mangold N. Le Mouelic S. Hauber E. Gondet B. Langevin Y. Poulet F. Arvidson R.
Two Years of Sulfate Mapping in Valles Marineris and Terra Meridiani as Seen by OMEGA/Mars Express [#1872]
We describe an updated view of the sulfate distribution associated to layered deposits, as seen by OMEGA/Mars Express.
- 10:45 a.m. Noe Dobrea E. Z. * Poulet F. Malin M. C.
Omega Analysis of Light-Toned Outcrops in the Chaotic Terrain of the Eastern Valles Marineris Region [#2068]
We investigate the compositional, morphologic, and stratigraphic relationships of light-toned outcrops in the chaotic terrain of the eastern Valles Marineris region using OMEGA, MOC, and MOLA data.
- 11:00 a.m. Fishbaugh K. E. * Poulet F. Langevin Y. Chevrier V. Bibring J.-P.
The Origin of Gypsum in the Mars North Polar Region [#1642]
The largest gypsum deposit on Mars, discovered by OMEGA, is mixed with the mafic north polar sand sea emanating from the Basal Unit. We discuss the origin of the gypsum as an evaporite deposit, formed in conditions unique to the region.
- 11:15 a.m. Poulet F. * Bibring J.-P. Langevin Y. Gondet B. Mustard J. Gendrin A. Mangold N. Loizeau D. Arvidson R. Chevrier V.
The Distribution of Phyllosilicates on Mars from the OMEGA-MEx Imaging Spectrometer [#1698]
New identifications by OMEGA of phyllosilicate minerals are presented and discussed, along with new evidence for regions containing hydrated minerals.
- 11:30 a.m. Langevin Y. * Poulet F. Vincendon M. Bibring J.-P. Gondet B. Schmitt B. Douté S.
New Observations of CO₂ and H₂O Ice by OMEGA/MEx in the South Polar Region of Mars During Late Summer (November/December 2005) [#1744]
We compare the late 2005 observations and the early 2004 observations of the Martian south polar cap by OMEGA over significant fractions of the cap.