Monday, July 21, 2003
EARLY MARS
8:30 a.m. Ramo Auditorium

Chairs: R. J. Phillips
M. H. Acuña

8:25 a.m. Albee A.L.
Welcome and Introductions

8:30–9:00 a.m. Acuña M. H. *
Martian Crustal Magnetism: What Have We Learned After ~6 Years of MGS Observations? **[#3206]**
This paper will review the findings of Mars Global Surveyor about the magnetization state of the planet. Almost six years of observations have provided a unique view into Mars' interior and thermal history.

9:00–9:20 a.m. Ghosh A. * Weidenschilling S. J. Nimmo F. McSween H. Y. Jr.
Early Accretion and Its Effect on the Thermal History of Mars **[#3159]**
We evaluate the possible effect of early accretion (and short-lived radionuclides) on the thermal history of Mars.

9:20–9:40 a.m. Dreibus G. Brückner J. * Boynton W. V.
Evolution of the Martian Crust as Derived from Surface Measurements by Mars Odyssey, Other Space Missions, and Martian Meteorites **[#3088]**
The analysis of martian meteorites together with geophysical and geochemical data from orbital and in-situ space missions provide constraints on the nature of the martian crust. An estimation of the global crust composition is derived.

9:40–10:00 a.m. McLennan S. M. *
Composition and Chemical Evolution of the Martian Crust and Mantle: Integrating the Data from Missions and Meteorites **[#3099]**
Integrating geochemical and spectroscopic data from missions and SNC meteorites leads to new conclusions about the evolution of the martian mantle and crust. The mostly ancient crust is characterized by a LIL-element enriched basaltic composition.

10:00–10:20 a.m. Break

10:20–10:40 a.m. Taylor G. J. * Boynton W. Hamara D. Kerry K. Janes D. Keller J. Feldman W. Prettyman T. Reedy R. Brückner J. Wänke H. Evans L. Starr R. Squyres S. Karunatillake S. Gasnault O. Odyssey GRS Team
Igneous and Aqueous Processes on Mars: Evidence from Measurements of K and Th by the Mars Odyssey Gamma Ray Spectrometer **[#3207]**
Concentrations of K and Th and the K/Th ratio vary across the surface. Concentrations are higher than in martian meteorites, suggesting that most of the crust formed by partial melting of enriched mantle.

10:40–11:00 a.m. Frey H. V. *
Buried Impact Basins and the Earliest History of Mars **[#3104]**
Buried impact basins seen in MOLA data have important implications for the age of the lowland crust, what mechanisms could produce the crustal dichotomy, when the global magnetic field may have died, and the existence of crust older than the oldest observed surface units on Mars.

11:00–11:30 a.m. Phillips R. J. * Johnson C. L. Hynek B. M. Jakosky B. M.
Noachian Evolution of Mars **[#3021]**
The Noachian era on Mars saw the development of the Tharsis rise and the widespread creation of terrain types that required running water. We review both aspects and possible interrelationships between Tharsis evolution and global fluvial activity.