Tuesday, March 14, 2006
POSTER SESSION I: PHOENIX LANDING SITE
7:00 p.m. Fitness Center

Guinn J. Bonfiglio G. Craig L. Desai P. Garcia M. Grover R. Parker T. J. Prince J. Seelos K. Shotwell R. Slimko E.
The Engineering Behind Mars Exploration Program 2007 Phoenix Mission Landing Site Selection **[#2051]**
This abstract details the engineering processes used in the overall landing site selection process. The performance of the landing RADAR, IMU, thrusters and robustness of the lander structure to slopes and rocks drive safety concerns.

Golombek M. Grant J. Lorenzoni L. Steltzner A. Vasavada A. R. Voorhees C. Watkins M.
Preliminary Constraints and Plans for Mars Science Laboratory Landing Site Selection **[#2172]**
Mars Science Laboratory science objectives, preliminary constraints (planetary protection and engineering) and the plans for selection of a landing site via a series of landing site workshops open to the science community are discussed.

Seelos K. D. Arvidson R. E. Golombek M. Parker T. Tamppari L. Smith P.
Geomorphology and Terrain Characterization of the 2007 Phoenix Mission Landing Sites in the Northern Plains of Mars **[#2166]**
Geomorphology is described for the regions under consideration for Phoenix landing site selection. Patterned ground is ubiquitous and suggestive of widespread and long-term influence of subsurface ice.

Putzig N. E. Mellon M. T. Golombek M. P. Arvidson R. E.
Thermophysical Properties of the Phoenix Mars Landing Site Study Regions **[#2426]**
Analysis of Phoenix Mars study regions places 4 of 5 in a previously-identified duricrust-dominated thermophysical unit which also contains the Viking and Spirit landing sites. Extrapolation of lander-observed properties to the study regions may be complicated by surface heterogeneity.

Marlow J. J. Klein C. R. Martinez M. M. McGrane B. S. Golombek M. P.
Boulder Hazard Assessment of Potential Phoenix Landing Sites **[#1094]**
In the search for a safe landing site for the Phoenix Mars Lander, the threat posed by boulders visible from orbit was evaluated. Intensive analysis indicated that such boulders represent a minimal hazard and will most likely not significantly constrain landing site selection.

Beyer R. A.
Meter-scale Slopes from Point Photoclinometry for the Potential Phoenix Landing Sites **[#1923]**
A point photoclinometry technique is used to evaluate the meter-scale slope statistics of MOC images within the three potential Phoenix landing site boxes.

Barge L. M. Parker T. J.
Landing Site Map Compilation and Hazard Assessment for Phoenix **[#2341]**
Compilation of image base maps and hazard maps of the Phoenix B landing site region for: science team’s final landing site selection; nav team’s assessment of need for course corrections; assess surface hazards to EDL; localization after landing.

Kirk R. L. Rosiek M. R. Galuszka D. Redding B. Hare T. Parker T. J.
Topography of Candidate Phoenix Landing Sites from MOC Images **[#2033]**
Stereo and photoclinometry applied to MOC narrow angle images show that candidate landing sites for Phoenix are relatively smooth. Slopes over baselines ≥3 m are 0.8°–4.5°, comparable to the MER landing sites. HiRISE will address smaller hazards.

Gunnarsdottir H. M. Linscott I. R. Callas J. L. Cousins M. D.
Surface Properties of the 2007 Phoenix Landing Site B Using Bistatic UHF Radar **[#2421]**
During December 2005, several 70-cm bistatic radar experiments were conducted using the SRI 150-ft (46-m) diameter dish and the Mars Odyssey spacecraft, with the objective of recovering surface dielectric properties and roughness of landing site B.

Simpson R. A. Tyler G. L. Pätzold M. Häusler B.
Mars Express Bistatic Radar Observations in Northern Mars Plains with Possible Application to Phoenix Landing Site Characterization **[#1862]**
MEX bistatic radar data have been collected in northern plains (including two experiments near VL-2) and may be useful in characterizing the general environment for Phoenix.

Poulet F. Mustard J. Arvidson R. Bibring J.-P. Langevin Y. Gondet B. Milliken R. Pelkey S.
Mineralogy of the PHOENIX Landing Sites from the OMEGA-MEX Imaging Spectrometer **[#1706]**
OMEGA-MEx has targeted the three PHOENIX landing sites during the early 2004 summer (Ls=90°–110°). The surface composition of the three landing sites will be presented.

Titus T. N. Prettyman T. P. Colaprete A.
Thermal Characterization of the Three Proposed Phoenix Landing Sites **[#2161]**
We use Mars Global Surveyor (MGS) Thermal Emission Spectrometer (TES) temperature observations immediately following the springtime disappearance of seasonal CO_2 to estimate the thermal inertia and soil depth at the three proposed Phoenix landing sites.

Sizemore H. G. Mellon M. T.
Multi-Scale Variability in the Ice-Table Depth at Potential Phoenix Landing Sites **[#2141]**
We employ numerical simulations of subsurface thermal behavior on Mars to address questions of ice-table depth and variability on all scales relevant to Phoenix, with particular emphasis on scales relevant to excavation.

Boynton W. V. Janes D. M. Finch M. J. Williams R. M. S.
Simultaneous Determination of Dry-Layer Thickness and Sub-Surface Ice Content in the Polar Regions of Mars: Implications for the Phoenix Landing Site Selection **[#2376]**
By combining data from Si and H gamma rays from the polar regions, we can determine both the ice content of a sub-surface ice-rich layer and the thickness of an ice-free overlying layer. The dry layer is very thin at the Phoenix landing sites.

Tamppari L. K. Smith M. D. Bass D. S. Hale A. S.
Water-Ice, Water Vapor and Dust at the Phoenix Landing Latitudes and Seasons **[#2055]**
The Phoenix mission will carry two experiments that will observe water-ice, water-vapor, and dust in the martian atmosphere. As background and context, MGS TES observations of water-ice, water vapor and dust in the Phoenix landing zone and season have been examined and will be presented.

Tyler D. Barnes J. R.
Mesoscale and LES Model Simulations of the Meteorological Environment Expected During the Phoenix Mission **[#2466]**
The OSU Mars MM5 developed and described by Tyler et al. (2002) was adapted to simulate the meteorological environment that will be experienced by Phoenix during EDL and when on the surface of Mars.

Drube L. Madsen M. B. Olsen M. Jørgensen J. Britt D. Lemmon M. Shinohara C. Smith P.
Simulation of Dust Sedimentation on the Calibration Targets for the Surface Stereo Imager Onboard the Phoenix Mars Lander 2007 **[#1149]**
The Phoenix SSI calibration target contains six ring-magnets, each of which protects their inner area from dust (each inner area is a different color). This poster contains results from testing of the target in a dust sedimentation chamber.