Tuesday, March 15, 2005
POSTER SESSION I: MARS TECTONICS
7:00 p.m. Fitness Center

Hynek B. M. Phillips R. J.
*The Etched Terrain in Arabia Terra, Mars, is Tilted [#1222]*
The horizons of etched terrain layers in Meridiani are tilted and most follow the model topography of Tharsis-induced loading with a contribution from the pole-to-pole slope. This may indicate a very ancient age for rocks in this region of Mars.

Beyer R. A. McEwen A. S.
*Constraints on the Origin of Fine Layers in Ganges Mensa and Hebes Mensa, Mars [#1070]*
These mensae have been proposed to have steeply dipping layers. The dip angle and direction of these layers can be constrained with MOC and MOLA data. We find no evidence that steep layers are present, most are much shallower than thirty degrees.

*Attitude Determination of Geological Layers Using HRSC Data and Orion Software [#1498]*
Attitude of ILD layering in Valles Marineris, Mars, is measured using HRSC data and Orion software.

Okubo C. H. Schultz R. A.
*Evidence of Tharsis-Radial Dike Intrusion in Southeast Alba Patera from MOLA-based Topography of Pit Crater Chains [#1007]*
Pit crater chains in southeast Alba Patera are found to have local cross-strike topographies that are consistent with a mixed-mode of causative dike intrusion and normal faulting, with the causative tendencies changing with position along strike of each pit crater chain.

Wyrick D. Y. Ferrill D. A. Morris A. P. Sims D. W. Franklin N. M.
*Quantifying Fault Networks on Alba Patera, Mars [#2279]*
Newly developed terrestrial approaches were applied to martian fault networks to quantify the extent and degree of fault network connectivity. These techniques will provide key constraints for martian hydrological models.

Lucchitta B. K.
*Light Layer and Sinuous Ridges on Plateau Near Juventae Chasma, Mars [#1500]*
The layer is associated with ridges topped by channels, indicating inverted relief. Dark flows overlap the light layer, suggesting interbedding with lavas, and strengthening the idea that light, incompetent layers occur in the walls of the Valles Marineris.

Dimitrova L. L. Holt W. E. Haines A. J.
*Constraining Lithospheric Stress and Strain on Mars from Mars Global Surveyor (MGS) Topography, Gravity and Crustal Thickness: II. Elastic Rheology Solutions [#2051]*
We calculate the vertically integrated deviatoric horizontal stresses associated with horizontal gradients of gravitational potential energy on Mars for elastic rheologies. We obtained an improved fit to structures in and around Tharsis.

Dimitrova L. L. Holt W. E. Haines A. J.
*Constraining Lithospheric Stress and Strain on Mars from Mars Global Surveyor (MGS) Topography, Gravity and Crustal Thickness: I. Viscous Rheology Solutions [#2039]*
We calculate the vertically integrated deviatoric horizontal stresses associated with horizontal gradients of gravitational potential energy on Mars for viscous rheologies. We compare our results with grabens and wrinkle ridges in and around Tharsis.