Tuesday, March 18, 2014
POSTER SESSION: STRUCTURE AND EVOLUTION OF PLANETARY BODIES:
A GEOPHYSICAL PERSPECTIVE
6:00 p.m.  Town Center Exhibit Area

Wong T.  Solomatov V. S.  
POSTER LOCATION #343
Constraints on Lithospheric Stresses and Subduction Initiation from Steady-State Convection: Application to Terrestrial Planets [#1298]  
To understand the mechanisms of subduction of planetary lithospheres, we develop scaling laws for the lithospheric stresses from sublithospheric convection.

Sekhar P.  King S. D.  
POSTER LOCATION #344
Constraining Viscosity Layering on Mars Using Geoid and Topography from Mantle Convection Models [#2445]  
Mantle convection modeling on Mars to analyze the geoid and topography constrained by viscosity layering, Rayleigh number, and internal heating parameters.

Plesa A. C.  Breuer D.  Grott M.  Tosi N.  
POSTER LOCATION #345
Constraining the Amount of Radiogenic Elements in the Interior of Mars from the HP² Heat Flow Measurement [#2527]  
A model is presented that allows calculation of the present heat production rate from the measured heat flow using Urey ratio systematics from convection modeling.

Kamata S.  Nimmo F.  
POSTER LOCATION #346
Basin Relaxation as a Probe of Pluto’s Thermal History [#1736]  
The basin relaxation state on Pluto is mainly controlled by the reference viscosity of ice, not by the presence of a subsurface ocean.

Mazarico E.  Genova A.  Goossens S. J.  Lemoine F. G.  Smith D. E.  et al.  
POSTER LOCATION #347
The Gravity Field of Mercury from MESSENGER [#1863]  
We present an update to the gravity field obtained from MESSENGER radio tracking data, as well as other geophysical parameters (obliquity, tidal Love number).

POSTER LOCATION #348
Mars Gravity Field and Thermosphere from Mars Reconnaissance Orbiter [#2479]  
The static gravity field and the thermosphere of Mars from radio science data of the Mars Reconnaissance Orbiter (MRO) mission.

Ojha L.  Smrekar S.  Nunes D.  
POSTER LOCATION #349
Geophysical Investigation of the InSight Landing Site [#2181]  
We sought to conduct a local fit to the crustal thickness using admittance modeling, and examine the possible origin of gravity anomalies in Elysium Planitia.

Yamamoto Y. Y.  Yamada R. Y.  Nakamura Y. N.  
POSTER LOCATION #350
Restoration and Verification of Seismic Data Record on Viking Lander 2 Mission [#1808]  
We recover the Viking seismic data and confirm the validity comparing with the data on a report.

Weber R. C.  Schmerr N. C.  
POSTER LOCATION #351
GRAIL Refinements to Lunar Seismic Structure [#2008]  
We use gravity data recorded by the GRAIL mission to refine analyses of the Apollo seismic data, in order to improve our understanding of the Moon’s structure.

Suavet C.  Weiss B. P.  Lima E. A.  Gattacceca J.  Grove T. L.  
POSTER LOCATION #352
Controlled-Atmosphere Thermal Demagnetization and Paleointensity Analyses of Lunar Rocks [#2092]  
Oxygen fugacity control during heating prevents alteration of magnetic minerals in mare basalts, but troilite is unstable, which prevents paleofield estimation.
Ditty M. L.  Ravat D.  
**Mars Paleopole and Magnetization Estimates from Magnetization Edge Effects: A New Method** [#2075]

We present a new method of determining magnetization vector and paleopole location of magnetic sources with long edges adjacent to non-magnetic regions on Mars.

Watters T. R.  Leuschen C. J.  Campbell B. A.  
Grant J. A.  Morgan G. A.  et al.  
**MARSIS Subsurface Radar Sounding of Meridiani Planum, Mars: Implications for the Properties of the Plains Deposits** [#2521]

Subsurface reflectors in the Meridiani Planum plains deposits detected by the MARSIS radar sounder.

Putzig N. E.  Foss F. J. II  Campbell B. A.  Phillips R. J.  
**Interior of Mars’ Planum Boreum Fully Imaged in a 3-D Volume of SHARAD Data** [#2624]

We apply the migration process to a 3-D volume of radar observations from 1579 orbits to fully image the internal structure of the icy polar layered deposits.

Wood S. E.  Holsapple K. A.  Housen K. R.  
**A Physical Model for the Depth Profile of Thermal Conductivity in the Megaregolith of Airless Bodies: Implications for Interior Thermal Structure and Evolution** [#2918]

A physical model of thermal conductivity for planetary regolith is applied to estimate the vertical temperature profile in the megaregolith of airless bodies.

ElShafie A.  Chevrier V. F.  
**Reanalysis of the Penetration Data Provided by Lunokhod Rover on the Moon** [#1533]

We reanalyzed the penetration data provide by the Lunokhod rover for possible subsurface interpretations.

**Catalogue of Lunar Thermal Anomalies** [#2208]

Total 266 thermal anomalies on the nighttime lunar surface were identified from the CE-2 37-GHz TB data. The heating and cooling in a lunation was studied.

Cao H.  Russell C. T.  Dougherty M. K.  
**Magnetic Signatures from the Interiors of Jupiter and Saturn** [#1628]

We derived implications for the interior structures (core size, helium redistribution) and dynamics of Jupiter and Saturn from their intrinsic magnetic fields.