

Thursday, March 18, 2004
POSTER SESSION II: LUNAR GEOPHYSICS: ROCKIN' AND A-REELIN'
7:00 p.m. Fitness Center

Scott R. S. Wilson L.

The Influence of Tidal, Despinning, and Magma Ocean Cooling Stresses on the Magnitude and Orientation of the Moon's Early Global Stress Field [#1542]

We address the influence tidal, de-spinning, and magma ocean cooling stresses have on the global stress field of a growing lunar crust. Surface extensional and strike-slip features are evident. Strike-slip faulting operates to great crustal depths.

Barkin Yu. V. Ferrandiz J. M.

New Approach to Development of Moon Rotation Theory [#1294]

The motion of two-layer Moon (mantle-liquid core) in gravitational fields of the Earth and the Sun is studied. Generalized Cassini's laws for this model of the Moon have been described as a generating solution on the basis of average equations.

Williams J. G. Boggs D. H. Ratcliff J. T.

Lunar Core and Tides [#1398]

New LLR data permit solutions for lunar parameters with improved uncertainties. The effect of the oblateness of the fluid core/solid mantle boundary seems to be significant. Direct detection of the fluid core Moment of Inertia remains elusive.

Sugano T. Heki K.

Lunar Interior Studies Using Lunar Prospector Line-of-Sight Acceleration Data [#1567]

We have made lunar gravity anomaly maps using Lunar Prospector Line-of-Sight acceleration data during low-altitude extended mission. Using these maps, we argue the compensation state of craters and mascons.

Chenet H. Lognonné P. Wiczorek M. Mizutani H.

A First Crustal Thickness Map of the Moon with Apollo Seismic Data [#1581]

Former studies of the Apollo seismic data gave a 1D view of the lunar crust: 1 mean thickness value for the Apollo 12-14 area. We show here that seismology (+topography) can assess lateral variations of crustal thickness, and propose a first map.

Bulow R. C. Johnson C. L. Shearer P. M.

New Events Discovered in the Apollo Lunar Seismic Data [#1184]

Using our processed version of the Apollo seismic data, we search for new deep moonquakes by cross-correlating a stack of previously known events with the continuous time series.

Nakamura Y.

More Far-Side Deep Moonquake Nests Discovered [#1155]

Reanalysis of seismic data from the Apollo project identified 49 deep moonquake nests that could be on the far side. Four have been located and the rest are being investigated further to see if they provide new information on Moon's deep interior.

Khavroshkin O. B. Tsyplakov V. V.

Manifestation of Gas-Dust Streams from Double Stars on Lunar Seismicity [#1275]

The Moon seismic data are analysed by new methods. Hidden astrophysical periodicities of seismicity are obtained from analysing of vary time series. Time picks of spectrums also confirm that the meteoroid streams are modulated by some planets and satellites on their orbital periods.