Thursday, March 15, 2007
POSTER SESSION II: LUNAR METEORITES
6:30 p.m. Fitness Center

Takeda H. Arai T. Yamaguchi A. Otuki M. Ishii T.
Mineralogy of Dhofar 309, 489, and Yamato-86032 and Varieties of Lithologies of the Lunar Farside Crust **[#1607]**
Dhofar 489 and Yamato(Y)-86032 are keys to understanding the lunar farside crust. Mg-rich anorthosites were found in Dhofar 309, as well as Dhofar 489. Fe-rich anorthosite with negative ε_{Nd} in Y-86032 requires the crustal formation process of farside distinct from that for nearside.

Kuehner S. M. Irving A. J. Korotev R. L. Hupé G. M. Ralew S.
Zircon-Baddeleyite-bearing Silica+K-Feldspar Granophyre Clasts in KREEP-rich Lunar Breccias Northwest Africa 4472 and 4485 **[#1516]**
These paired lunar meteorites contain clasts of Si-K-Zr-rich granophyre and have KREEP-rich bulk compositions similar to Apollo "LKFM" mafic impact melt breccias.

Hill E. Taylor L. A. Liu Y.
LaPaz 04841: Comparative Petrology and Textural Study of a New Lunar Mare Basalt Meteorite **[#1399]**
We present the first textural description, mineralogy, and mineral chemistry of LAP 04841, and confirm similarities with the other LaPaz basalts. Impact-shock effects show the range of pressures is encountered within a few millimeters, and suggest complex controls on pressure dissipation.

Hallis L. H. Joy K. H. Anand M. Russell S. S.
Compositional Analysis of the Very Low-Ti Mare Basalt Component of NWA 773 and Comparison with Low-Ti Basalts LAP 03632 & 02436 **[#1703]**
This project is a study of petrological and mineralogical similarities of LAP 03632, LAP 02436 and specific mare-basalt clasts within the regolith breccia portion of NWA 773. The aim is to investigate the relationship between these young lunar basalts.

Zeigler R. A. Korotev R. L. Jolliff B. L.
Petrograhy, Geochemistry, and Pairing Relationships of Basaltic Lunar Meteorite Stones NWA 773, NWA 2700, NWA 2727, NWA 2977, and NWA 3160 **[#2109]**
We discuss the petrography, geochemistry, and pairing relationships of the cumulus olivine gabbro, porphyritic olivine basalt, and regolith breccia lithologies in the meteorites: NWA 773, NWA 2700, NWA 2727, NWA 2977, NWA 3160, and an unpaired stone.

Joy K. H. Anand M. Crawford I. A. Russell S. S.
Petrography and Bulk Composition of Miller Range 05035: A New Lunar VLT Gabbro **[#1867]**
MIL 05035 is a new holocrystalline lunar mare gabbroic meteorite. We report investigations into the sample's mineralogy and bulk composition.

Liu Y. Hill E. Patchen A. Taylor L. A.
New Lunar Meteorite MIL 05035: Petrography and Mineralogy **[#2103]**
Characterization of new lunar meteorite MIL05035 and its abundant break-down assemblages.

Spicuzza M. J. Day J. M. D. Taylor L. A. Valley J. W.
Oxygen Isotope Similarities and Differences Between the Earth and Moon: Can Oxygen Isotopes Distinguish Meteorites on the Moon **[#2025]**
We report and evaluate high-precision three oxygen isotope data for lunar mare basalts, lunar meteorites, and SNC meteorites. The variability of $\Delta^{18}O$ in lunar igneous rocks is small. With care, $\Delta^{18}O$ could be used to identify meteorites on the Moon.

Haloda J. Gabzdyl P. Tycova P. Fernandes V. A.
Lunar Meteorite Northeast Africa 003-A: Microstructures, Crystallization Modeling and Possible Lunar Source Areas **[#1768]**
Lunar meteorite NEA 003-A is a low-Ti olivine-rich mare basalt with recently determined young Ar-Ar age of 2.377 Ga. The microstructures in the rock together with crystallization modeling indicate relatively stable magma crystallization conditions. Possible sources of the NEA 003-A are discussed.