Tuesday, March 15, 2005
POSTER SESSION I: LUNAR MISSIONS: PAST, PRESENT, FUTURE
7:00 p.m. Fitness Center

Foing B. H. Racca G. D. Grande M. Huovelin J. Josset J. L. Keller H. U. Nathues A. Malkki A. Heather D. Koschny D. Almeida M. Frew D. Lumb R. Volp J. Zender J.
ESA's SMART-1 Mission at the Moon: First Results, Status and Next Steps **[#2404]**
ESA's SMART-1 is at the Moon! Launched by Ariane-5 in Sept. 2003, it used primary solar electric propulsion to reach lunar capture on 17 November 2004, and to spiral down to lunar science orbit. First data and results from the cruise approach and lunar commissioning will be presented.

Mitrofanov I. G. Sanin A. B. Kozyrev A. S. Litvak M. L. Mokrousov M. I. Tretyakov V. I.
Lunar Exploration Neutron Detector for NASA Lunar Reconnaissance Orbiter **[#1879]**
The Lunar Exploration Neutron Detector instrument will operate onboard the NASA Lunar Reconnaissance Orbiter. The LEND is designed to find hydrogen and water resources on the Moon and to measure the radiation environment for future human missions.

Robinson M. S. Eliason E. M. Hiesinger H. Jolliff B. L. McEwen A. S. Malin M. C. Ravine M. A. Roberts D. Thomas P. C. Turtle E. P.
LROC — Lunar Reconnaissance Orbiter Camera **[#1576]**
The Lunar Reconnaissance Orbiter Camera (LROC) consists of two narrow-angle components to provide 0.5-m/p scale BW images over a 5-km swath, and a wide-angle component to provide images at a scale of 100 m/p in seven bands over a 100-km swath to address two of the prime LRO measurement requirements.

Clark P. E. Curtis S. A. Rilee M. L. Floyd S. R.
ALI (Autonomous Lunar Investigator): Revolutionary Approach to Exploring the Moon with Addressable Reconfigurable Technology **[#1217]**
Addressable Reconfigurable Technology (ART), conceived for future ANTS (Autonomous Nanotechnology Swarm) Architectures, is now implemented as Autonomous Lunar Investigator (ALI) rovers, a mission concept allowing autonomous exploration of the lunar farside and poles within 10 years.

Spudis P. D. Bussey D. B. J. Lichtenberg C. Marinelli B. Nozette S.
Mini-SAR: An Imaging Radar for the Chandrayaan-1 Mission to the Moon **[#1153]**
We will fly a small imaging radar on the Indian Chandrayaan mission to the Moon, to be launched in September, 2007. Mini-SAR will map the scattering properties of the lunar poles, determining the presence and extent of polar ice.

Okada T. Shirai K. Yamamoto Y. Arai T. Ogawa K. Hosono K. Kato M.
Lunar X-Ray Fluorescence Spectrometry from SELENE Lunar Polar Orbiter **[#1174]**
We have been developing an X-ray fluorescence spectrometer, XRS, for SELENE mission to map major elemental composition of lunar surface. The scientific objectives as well as current status of the instrumental development is also described.

Arai T. Yamamoto Y. Okada T. Shirai K. Ogawa K. Hosono K. Kato M.
Onboard Software Analysis of SELENE XRS **[#1631]**
An X-ray fluorescence spectrometer (XRS) onboard SELELE spacecraft will quantitatively determine major elemental compositions of the lunar surface. In this study, we introduce observation data analysis by using software process of onboard computer.

Hasebe N. Yamashita N. Kobayashi M.-N. Miyachi T. Miyajima M. Okudaira O. Kobayashi S. Hosojima T. Pushkin K. N. Tezuka C. Doke T. Shibamura E.
Planetary Gamma-Ray Imager Using High Pressure Xenon Time Projection Chamber **[#1861]**
Gamma-ray imaging camera is considered for planetary science. The high pressure Xe time projection chamber (HPXe-TPC) is introduced, which is estimated to have a spatial resolution of 5 to 40 km at the altitude of 100 km.

Kobayashi M.-N. Berezhnoy A. A. d'Uston C. Fujii M. Hasebe N. Hiroishi T. Kaneko H. Miyachi T. Mori K. Maurice S. Nakazawa M. Narasaki K. Okudaira O. Shibamura E. Takashima T. Yamashita N.
Global Mapping of Elemental Abundance on Lunar Surface by SELENE Gamma-Ray Spectrometer **[#2092]**
Elemental composition on the surface of a planet is very important information. Gamma-ray spectrometer (GRS) will be on board SELENE and will provide global mapping of lunar surface material composition.

Ohtake M. Arai T. Takeda H.
Study of the Apollo16 Landing Site: Re-Visit as a Standard Site for the SELENE Multiband Imager **[#1637]**
Purpose of this study is to re-evaluate optical properties of Apollo 16 landing site by studying correlation between their mineralogy and reflectance spectra and select a best standard area for the Multiband Imager for the SELENE mission.

Yamada R. Yamada I. Kobayashi N. Takeuchi N. Shiraishi H. Tanaka S. Fujimura A. Mizutani H. LUNAR-A Penetrator Science Team
Characteristics of a Seismometer for the LUNAR-A Penetrator **[#1715]**
We examined the dynamic response of the LUNAR-A seismometer at Inuyama Seismic Observatory after the impact tests, which simulate the impacts condition of the penetrator on the lunar surface. We confirmed that its dynamic response was similar to that of STS-2 in the range 0.2 Hz to 6.0 Hz.

Head J. N. Hoppa G. V. Gardner T. G. Seybold K. S. Svitek T.
Autonomous Low Cost Precision Lander for Lunar Exploration **[#1471]**
A planetary vehicle derived from mature DOD technologies with 10-meter landing precision has been designed. Such precision enables exploration of high-value, hard-to-reach targets. Applications include the Moon, Europa, Mars, and small bodies.

Keller J. W. Zurbuchen T. H. Baragiola R. A. Cassidy T. A. Chornay D. J. Collier M. R. Hartle R. E. Johnson R. E. Killen R. M. Koehn P. Ogilvie K. W. Scherer S. Stubbs T.
Pickup Ion Mass Spectrometry for Surface Bounded Exospheres and Composition Mapping of Lunar and Planetary Surfaces **[#1801]**
We discuss the study of surface bounded exospheres such as those found on the Moon and Mercury through pickup ion mass spectrometry and mapping the surface compositions of these objects.

Becker T. Weller L. Gaddis L. R. Soltesz D. Cook D. Archinal B. A Bennett A. McDaniel T. Redding B. Richie J.
Lunar Orbiter Revived: Update on Final Stages of Scanning, Archiving, and Cartographic Processing at USGS **[#1836]**
U. S. Geological Survey Astrogeology Program reports on the status of their effort to scan and process Lunar Orbiter film-strip data. The ultimate product will be a global, cartographically accurate digital mosaic of the Moon.