

Results from LRO-LCROSS Session

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Constellation Program Perspective

- Chris Culbert – JSC
- Comprehensive overview of recent activities for surface systems
- LRO data set value
 - Safe Landing
 - Hazard Identification
 - Lighting
 - Radiation

How Will the Results from LRO/LCROSS Facilitate a Sustainable Lunar Architecture

- Rich Vondrak – GSFC
- Broad overview of LRO capabilities and mission status
- Result: Comprehensive Atlas of the Moon with unprecedented accuracy and precision
- Data will be available in the Planetary Data System with global access

Lunar Polar Regions – Resources and Characteristics

- LROC - Mark Robinson, ASU
 - Detail from Narrow Angle Camera enables deeper insight into geologic/resource context
 - Multiple bands in Wide Angle Camera aid in resource identification
- LOLA – Dave Smith, GSFC
 - LOLA measurement density at human lander scale
 - Significant impact on fidelity of lighting models

Lunar Polar Regions – Resources and Characteristics (cont'd)

- Diviner – David Paige, UCLA
 - The Moon contains some of the coldest places in the solar system
 - Combination of improved lighting maps and temperature measurements aid in the identification of areas lit for some portion of the year, yet remain cold enough at depth to preserve water ice over geologic time
 - Multiple band measurements aid in resource identification
 - Hazard identification – rock abundance
- LEND – Igor Mitrofanov, IKI
 - Confirms large scale suppressed neutron feature found by Lunar Prospector
 - Identifies suppressed neutron regions outside of permanent shadow

Lunar Polar Regions – Resources and Characteristics (cont'd)

- Mini-RF – Ben Bussey, APL
 - Imaging within permanently shadowed regions
 - Imaging in the dark
 - Potential for topographic information within the gores of LOLA
 - Full Stokes parameter assessment and analysis, implications for water ice identification - high circular polarization ratio
- LAMP – Kert Retherford, SwRI
 - Strong support for LCROSS impact
 - Darkening within permanently shadowed regions

Radiation Hazards

- CRaTER – Justin Kasper, Smithsonian Astrophysical Observatory
 - Primer on space radiation and effects on astronauts
 - Instrument sensitivity demonstrated – effect of
- LEND – Igor Mitrofanov, IKI
 - > 10 MeV component of neutron albedo
 - Ongoing characterization of instrument at Dubna