

# Lunar Science Workshop Planning

---

Planetary Science Subcommittee  
Sean C. Solomon, Chair

---

NAC Science Subcommittee Meeting  
L'Enfant Plaza Hotel  
6-7 July 2006

## Context: May 2006 PSS Recommendations

- “A program should be planned for the scientific analysis of data to be obtained by ongoing and future lunar missions, including the Lunar Reconnaissance Orbiter and missions by international partners.”
- “Strategic planning for solar system exploration should integrate the currently distinct plans for Mars and the Moon with those for other solar system bodies.”

### *July 2006 Corollary*

- The time between delivery of Subcommittee recommendations to NAC and the transmittal of NAC recommendations to NASA should be shortened and should, at the least, be less than the time between NAC meetings.

## LEAG Lunar Science Goals Provide Starting Point for PSS

- Bombardment history of inner solar system
- Lunar origin; interior processes and history
- Shadowed polar environments: unsampled “treasures”
- Regolith as recorder of Sun’s history
- Goals addressing biology and medicine, astronomy, Earth observations, and utilization of lunar resources

## PSS Approach to Lunar Science Workshop

- Start with high-level LEAG goals
- Develop objectives for each goal, in large part from Exploration Strategy document
- Map objectives to measurements and infrastructure requirements through a science traceability matrix
- Distinguish objective best addressed robotically from those best addressed by humans with field expertise
- Develop cost estimates for accomplishing each objective

## Some Near-Term Milestones

- Review and assessment of the Lunar Exploration Strategy to be led by LEAG and completed by end of September
- Organization of a forward-looking special session on Lunar Science to be organized for the Fall AGU Meeting by Ariel Anbar (ASU) and Paul Lucey (University of Hawaii)
- Current scientific goals for lunar exploration to be cast in written form (paralleling a document for the Outer Solar System recently completed by OPAG) by LEAG this fall

## Some Larger Issues

- Balance is needed between focused investigations (Moon, Mars) and continued reconnaissance and exploration of the rest of the solar system
- Highest-priority goals for lunar science should be those planetary science topics that either are best addressed at the Moon or for which study of the Moon will enhance general understanding
- Development of new technologies and infrastructure should be carried out so as to optimize applications across all SMD programs