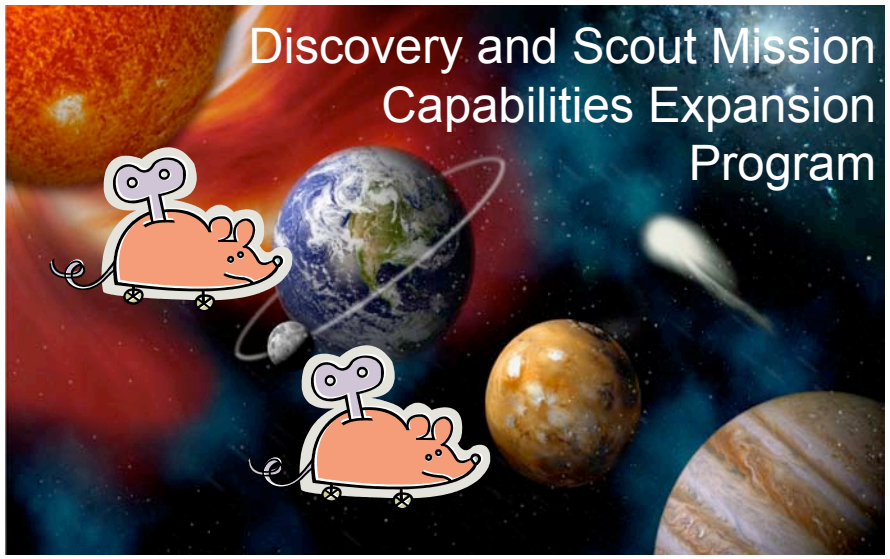

November 8, 2007 – OPAG Meeting

Discovery and Scout Mission Capabilities Expansion Program

- Intended to foster exploration in the planetary science community of missions enabled by nuclear power by
  - encouraging the formation of mission design teams
  - beginning the discussion of necessary engineering trades
  - discovering the breadth of missions possible with the addition of the ASRG technology to the Discovery and/or Mars Scout programs.
- Mission design assistance for these mission concepts will be offered by NASA
- Six month studies

Proposal Requirements and Content

- PI must be a scientist supported by a small science team
- Study limited to 6 months duration
- Proposals limited to 7 pages
- Summarize the mission concept, science target(s) and objectives, relevance, mission elements to be studied, and the nature of the science advancement expected from the mission.
- Must need ASRG
- Only planetary science missions appropriate for Discovery and Scout programs
- Studies funded at $200-$300K
  - Cost sharing encouraged
- Mission design expertise offered by NASA

Mission Concept Parameters

- The study of any solar system body, excluding the Sun and the Earth, is permitted.
  - Multiple targets are permitted in a single mission concept. Mission concepts dealing with extrasolar planets are not permitted under this program.
- Enabled by the use of ASRG as the primary power source
  - ASRG may be supplemented by solar power for the primary or any secondary spacecraft.
- The mission concept must launch in 2012-2013 timeframe
- A pair of fueled ASRGs should be considered as GFE at no cost to the mission concept.
  - The ASRGs will provide 280 W at the beginning of the mission and degrade by 0.8% annually.
- Cost cap of $450M (FY 2008), including launch vehicle
  - excluding the costs of ASRGs and NEPA approval.
- The mission concept should utilize an EELV-class LV

Frequently Asked Questions thus far

- Can I have more than 2 ASRGs
  - No
- Must I use ASRGs
  - Yes
- Instead of ASRGs can I use <*insert TRL 0 power system here*>?
  - No
- Will the ASRG work on the Moon? On Venus?
  - Environmental analyses have been done for deep space and Mars surface. It's expected it will work fine on the moon.