

# Planetary Science Division Update

*Presentation at the  
Planetary Science Subcommittee*

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# Outline

- Division Overview - Jim
  - Administration
  - Upcoming Opportunities & Selections
  - Mission Status and Plans
  - PSS Recommendations
- Mars Program Overview - Doug
- MSL Cost Overrun Status & Plans - Jim

# Administration

- New Personnel:
  - Mary Voytek (USGS detailee) - Astrobiologist
  - Tibor Kremic (GRC detailee) - Assistant for Flight Program
- Hiring status at Hq has slowed down maybe months before PSD obtains approval for new hires (ie: Astrobiology...)

# Academy Studies

- Congress: NASA will fund National Academy studies
  - R&A - Balance with missions
  - Radioisotope Power System Requirements & availability of Plutonium
  - NEO - address issues in the detection and mitigation
    - Jointly requested by NASA and NSF
- NASA directed:
  - Science Opportunities Enabled by NASA's Constellation System
  - Planetary Protection for Mars Sample Return
- Charge to the Academy for next Planetary Decadal report to be delivered by end of 2008
  - Will be jointly requested by NASA & NSF
  - Task under development
  - Expect Academy to start process late this year or early next

# Decadal Task Overview

- An overview of planetary science—what it is, its relationship to other scientific endeavors, and why it is compelling
- A broad survey of the current state of knowledge of the solar system
- An inventory of the top-level scientific questions that should guide flight programs and supporting research programs
- Recommendations on the optimum balance among small, medium, and large missions and supporting activities
- A discussion of high value technology development needs
- A prioritized list of major flight investigations to be initiated over the decade 2011-2020
- Recommendations for supporting research required to maximize the science return from the flight investigations
- Covers Solar System including the Mars & Moon
- Extrasolar planets are covered in the Astrophysics Decadal

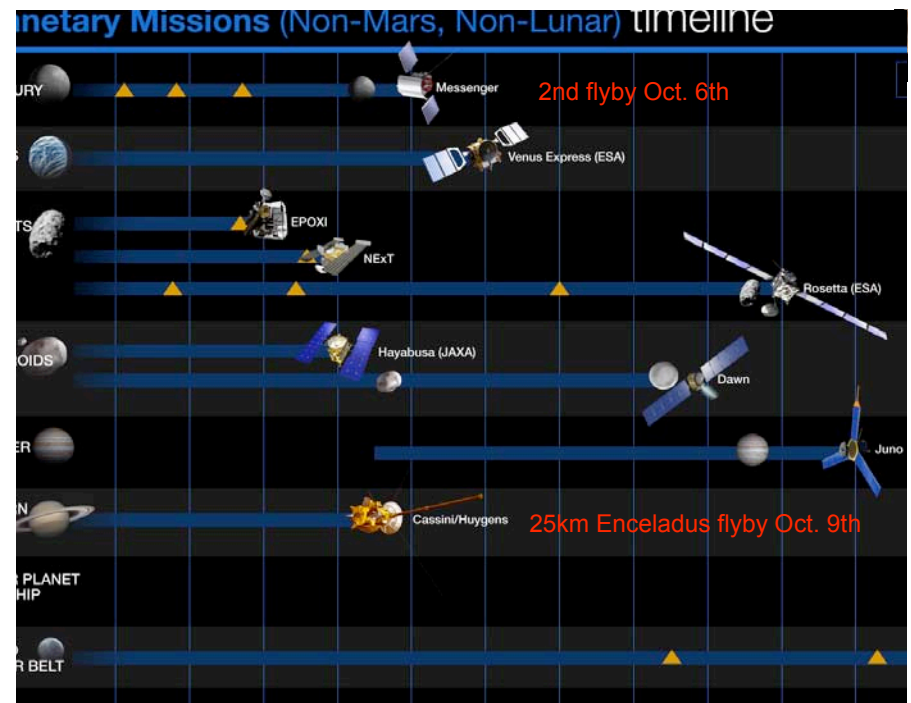
# Recent Selections

- Mars Atmosphere and Volatile Evolution (MAVEN)
  - Launch in ~November 2013
- Astrobiology CAN #5
  - 10 selections (5 new 5 returning teams but 2 with new PIs)
  - 27% success rate
  - Obtained contributions from Astrophysics and Earth Science Divisions
  - Press release today!



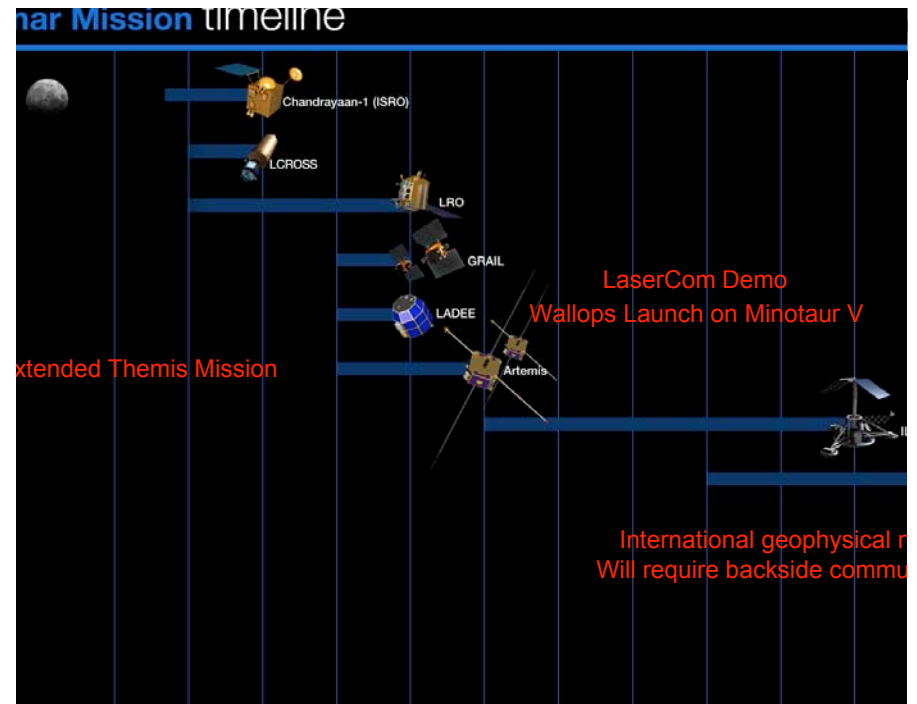
# Upcoming 2008 Opportunities

- Lunar Advanced Science and Exploration Research
  - ESMD is not participating in the 2008 ROSES call but will meet their 2007 ROSES commitments
- NASA Lunar Science Institute Nodes
  - 32 proposals received
  - ESMD will be part of the selection and fund at least one node
- Stand-Alone Mission of Opportunity Notification (SAL)
  - Released: September 3, 2008
  - Preproposal conference held: September 26, 2008
  - Each proposal opportunity has its own due date
- New Frontiers #3 AO - current schedule
  - Draft release: October 2008
  - Final release: January 2009
- Discovery - under review



# OPF Studies

- NASA-ESA joint studies of Jupiter System and Saturn System Science
  - Studies to concentrate on costing the “sweet spot” science missions
  - Align schedule with ESA: 2018-2022 launch date
- New schedule for delivery of studies is Nov. 3
- After delivery complete technical evaluation
- Presentation to NASA/ESA in January 2009
- One destination will go forward as a NASA/ESA effort
  - ESA: Continue as a part of the larger Cosmic Vision selection process
  - NASA: technical risk reduction and budget planning



# PSS Findings and Recommendations

# PSS recommendations

- R1: Breath of Decadal Committee
  - Reported this to COMPLEX (Aug. 20)
- R2: Over the next two years NASA refine cost estimates and candidate mission timelines for MSR
  - See Doug McCuiston’s presentation
- R3: Rover mobility be considered a minimum requirement for sortie missions to the Moon
  - See Gordon Johnston’s OSEWG presentation
- R4: Develop a plan in the near future to test and validate aerocapture system technologies
  - See David & Michelle’s presentation on Friday



## ▶ SALMON: Types of Missions or Opportunity

### ▶ Traditional MoOs

- Investigations involving participation in non-NASA space missions (ie: science instrument, technology demonstrations, hardware components ...)

### ▶ U.S. Participating Investigator

- Co-Investigator (non-hardware) for a science or technology experiment to be built and flown by an agency other than NASA

### ▶ New Science Missions using Existing Spacecraft

- Investigations that propose a new scientific use of existing NASA spacecraft (ie: NExT, EPOXI ...)

### ▶ Small Complete Missions

- Science investigations that can be realized within the specified cap (includes all phases from access to space through data publication)

### ▶ Focused Opportunities

- Investigations that address a specific, NASA-identified flight