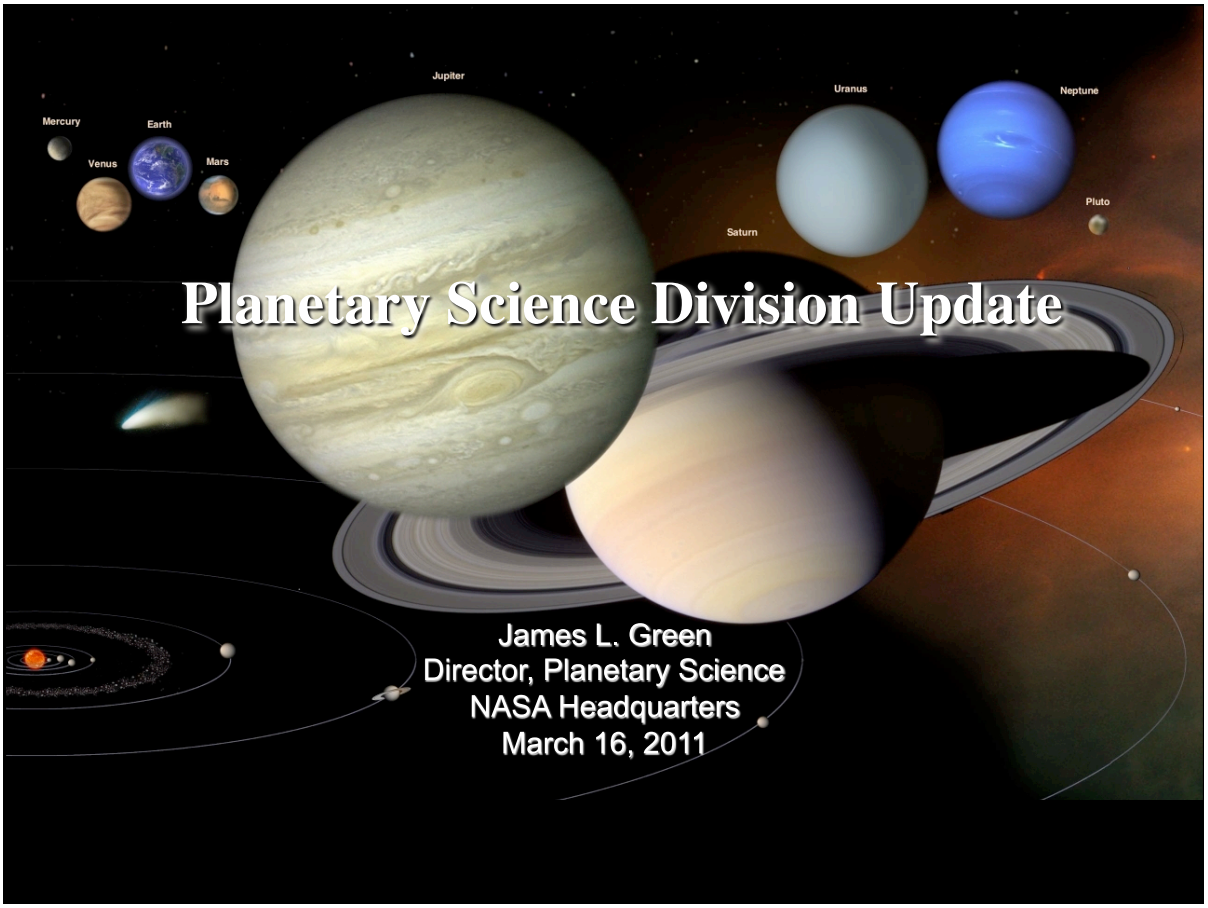


Planetary Science Division Update

James L. Green
Director, Planetary Science
NASA Headquarters
March 16, 2011

Decadal & NASA Presentations at LPSC

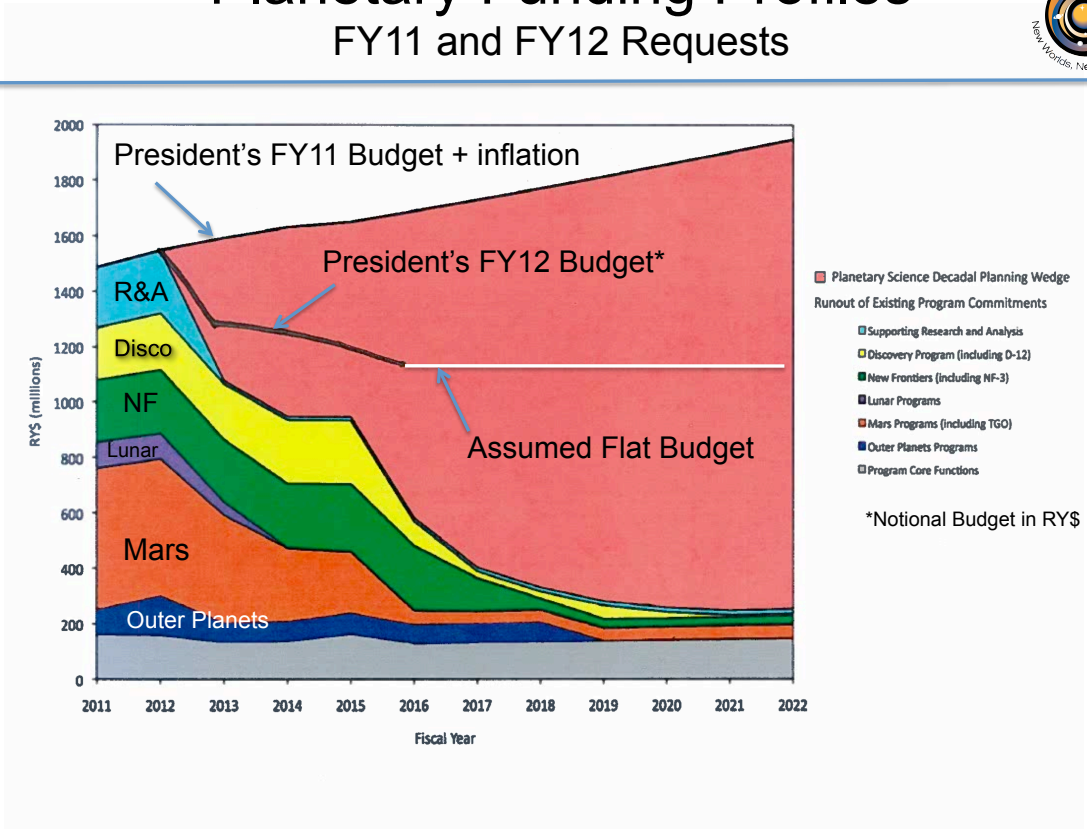
- Presentations at LPSC were broadcast live and available for replay at livestream.com
- Decadal Release:
  - http://www.livestream.com/2011lpsc/video?clipId=pla_18e48f98-4a78-4acc-ad2a-29c7a8ae326c
- NASA Night:
  - http://www.livestream.com/2011lpsc/video?clipId=pla_89ad644f-7be7-4bb1-806e-c14367f857ba&utm_source=lslibrary&utm_medium=ui-thumb
- Our special *thanks* to Steve Mackwell for making LPSC with Decadal rollout so successful!

Planetary Science Program Content

	FY 2010	Pres Bud	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Planetary Science	$1,364.4	$1,485.7	$1,488.9	$1,365.7	$1,326.4	$1,271.0	$1,188.9
Planetary Science Research	*$161.6*	*$180.4*	*$183.9*	*$196.0*	*$208.6*	*$208.4*	*$210.5*
Planetary Science Research and Analysis	$131.5	$131.0	$134.6	$135.3	$140.0	$142.8	$149.8
Other Missions and Data Analysis	$21.3	$23.9	$23.7	$25.5	$31.7	$28.2	$23.0
Education and Directorate Management	$3.0	$5.1	$5.1	$14.7	$16.3	$16.7	$16.5
Near Earth Object Observations	$5.8	$20.3	$20.4	$20.5	$20.6	$20.7	$21.1
Lunar Quest Program	*$94.5*	*$121.6*	*$114.5*	*$81.2*	*$48.9*	*$28.1*	*$19.5*
Lunar Science	$31.4	$59.7	$50.9	$48.1	$48.9	$28.1	$19.5
Lunar Atmosphere and Dust Environment Explorer	$48.2	$57.9	$63.2	$33.1			
International Lunar Network	$14.9	$4.0	$0.3		Notional		
Discovery	*$184.5*	*$202.0*	*$175.6*	*$205.1*	*$245.7*	*$265.5*	*$242.8*
Gravity Recovery and Interior Laboratory (GRAIL)	$124.1	$104.8	$40.5	$4.4			
Other Missions and Data Analysis	$60.4	$97.2	$135.1	$200.6	$245.7	$265.5	$242.8
New Frontiers	*$279.6*	*$223.8*	*$176.9*	*$265.8*	*$245.5*	*$291.1*	*$296.3*
Juno	$257.1	$184.2	$31.2	$17.6	$17.9	$16.7	$29.6
Other Missions and Data Analysis	$22.4	$39.6	$145.7	$248.2	$227.6	$274.4	$266.7
Mars Exploration	*$438.2*	*$532.8*	*$594.4*	*$433.1*	*$408.7*	*$309.0*	*$245.9*
2009 Mars Science Lab	$258.4	$231.6	$136.4	$40.5	$37.0		
MAVEN	$48.1	$161.2	$240.3	$140.6	$34.9	$15.4	$4.7
Other Missions and Data Analysis	$131.7	$140.0	$217.7	$252.0	$336.8	$293.5	$241.1
Outer Planets	*$100.6*	*$103.5*	*$120.8*	*$80.5*	*$82.2*	*$84.1*	*$88.5*
Technology	*$105.5*	*$121.5*	*$122.9*	*$104.1*	*$86.6*	*$84.9*	*$85.4*

Planetary Funding Profiles

FY11 and FY12 Requests



Planetary Science Program Structure

The budget cannot support all 5 [current] flight development programs; Decadal Survey will provide priorities to guide decision-making on which programs will be implemented as planned, and which may have to be cancelled, delayed, or descoped.

Current

- Discovery
- Mars Exploration
- Lunar Quest
- New Frontiers
- Outer Planets
- Research
- Technology

Implied by DS

- Discovery*
- New Frontiers*
- Flagship missions**
- Research
- Technology

*** The three mission programs are based on cost category, independent of destination.**
**** Not labeled as such, but listed as individual missions.**

Depiction of the Planetary Program Architecture Recommended in the Survey

Large Missions ("Flagship"-scale)

"Recommended Program" (budget increase new start for JEO)	*"Cost Constrained Program"* (based on FY11 Request)	*"Less favorable" budget picture than assumed* (e.g., outyears in FY12 request)
1) Mars Astrobiology Explorer-Cacher (MAX-C) – descoped	1) Mars Astrobiology Explorer-Cacher (MAX-C) – descoped	**Descope or delay Flagship missions**
2) Jupiter Europa Orbiter (JEO) – descoped	2) Uranus Orbiter & Probe (UOP)	
3) Uranus Orbiter & Probe (UOP)		
4/5) Enceladu Orbiter & Venus Climate Mission		

Discovery
$500M (FY15) cap per mission (exclusive of launch vehicle) and 24 month cadence for selection

New Frontiers
$1B (FY15) cap per mission (exclusive of launch vehicle) with two selections during 2013-22

Research & Analysis (5% above final FY11 amount then ~1.5%/yr)

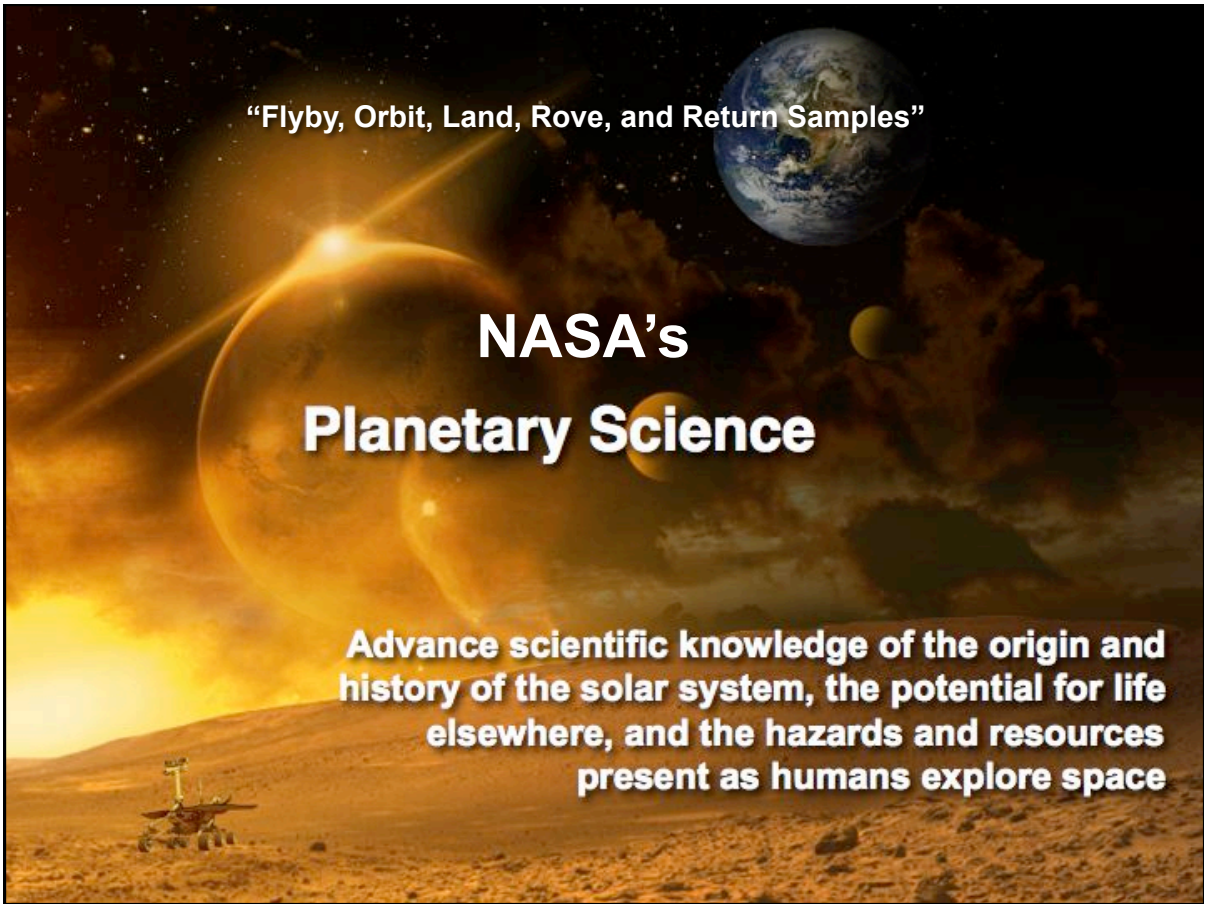
Technology Development (6-8%)

NASA-ESA Bilateral

- Planetary Decadal provides a clear path forward when combined with the President's FY12 budget
- Determine if Mars 2018 can be accomplished starting with the minimum set of requirements and "a clean sheet of paper" as Planetary's top priority flagship mission
- Reaffirm NASA's commitment to support ESA's *Laplace* mission if it is chosen as the CV-Large class mission
  - Up to 5 (as budget allows) of the scientific instruments on JGO as a Mission of Opportunity and support for their PI-led teams
  - Support for Interdisciplinary Scientists
  - A NASA Project Scientist to co-chair the international Project Science Group (PSG) with ESA Project Scientist

Schedule

- Decadal Town Hall meetings (March 15 – April 17)
  - See: http://solarsystem.nasa.gov/2013decadal
- PSD response to Decadal recommendations June 2011
  - Review draft with the PSS
- PSD works through NAC/PSS structure for advice and recommendations
- Development of FY13 budget (NASA, OMB/OSTP)
- President's FY13 budget request to Congress Feb. 2012
  - Will reflect Decadal recommendations within budget realities


"Flyby, Orbit, Land, Rove, and Return Samples"
NASA's
Planetary Science
Advance scientific knowledge of the origin and history of the solar system, the potential for life elsewhere, and the hazards and resources present as humans explore space