



**Science Mission  
Directorate**

**Lunar Planetary Science Conference**

**Orlando Figueroa  
Deputy Associate Administrator for Programs**

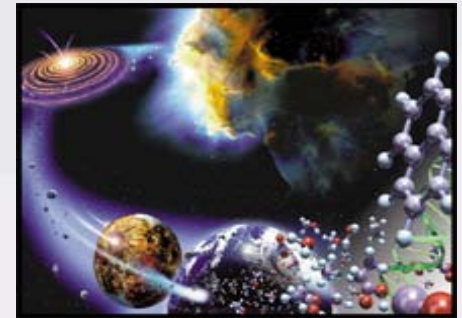


***To Improve Life Here***  
***To Extend Life to There***  
***To Find Life Beyond***

***Understand and Protect Our Home Planet*** - by studying the Sun, and the Earth system from space, and improving prediction of its changes

***Explore the Universe and Search for Life*** - by studying the origin, evolution, and destiny of the universe, and the solar system, and life within it.

***Inspire the Next Generation of Explorers*** by sharing the excitement of Earth and Space scientific discoveries, by training educators, and by sponsoring the education and early careers of Earth scientists, astronomers, physicists...



Space Science

Earth Science

Discovery

Prediction

# Science Mission Directorate

Comprehensive scientific investigations into the Origin, Evolution, and Destiny of the Earth, the Solar System, and the Universe

# NASA's Strategic Roadmaps

A coordinated and comprehensive strategy, with key decision points identified, that provides a foundation for priorities, decisions and investments

Robotic and Human Lunar Expeditions

**Mars Exploration**

**Solar System Exploration**

**Advanced Telescope Searches for Earth-like Planets**

Exploration Transportation System

International Space Station Assembly and Used

Shuttle Transition to New Exploration Launch Systems

**Origin, Evolution, Structure and Destiny of the Universe**

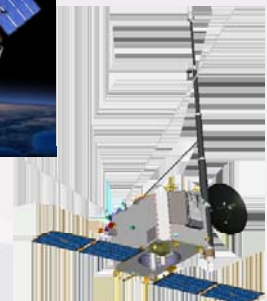
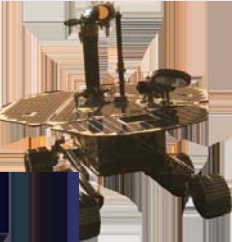
**Dynamic Earth System**

**Sun-Solar System Connection**

Transform Air Transportation

Educate Students and Public

National Plan for Nuclear Systems



# Strategic Planning Schedule

Key Milestone	Target Dates
SPC approval of planning	August 2004
FACA charters in place	December
Complete committee formation	December 2004/January 2005
Initial committee meetings; integration begins	January/February
Mid-term status reviews	March
Drafts (PPT charts+notes) for internal review	April 15
First synthesis workshop	Late April
<b>Roadmaps submitted for NRC review</b>	<b>June 1</b>
Second synthesis workshop	Late June
NRC reviews complete	August 1
Integrated Strategic Architecture complete	October 1



# NASA Capability Roadmaps

High-energy Power and Propulsion

In-space Transportation

## **Advanced Telescopes and Observatories**

Communication and Navigation

## **Robotic Access to Planetary Surfaces**

Human Planetary Landing Systems

Human Health and Support Systems

Human Exploration Systems and Mobility

## **Autonomous Systems and Robotics**

Transformational Spaceport/Range

## **Scientific Instruments/Sensors**

In-Situ Resource Utilization

## **Advanced Modeling, Simulation, Analysis**

Systems Engineering Cost/risk Analysis

## **Nanotechnology**



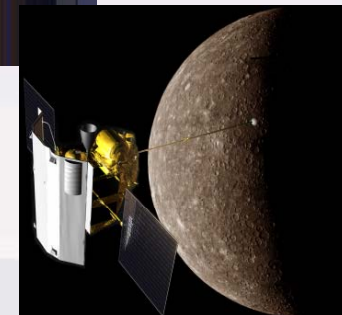
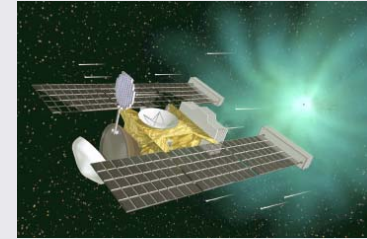
# Capability Roadmap Schedule

Key Milestone	Target Dates
Complete roadmap teams formation	November 2004
Public Workshop	November 2004
Strategic Planning Council Preview	February 2005
Drafts for internal review	April 15
Align with Strategic Roadmaps	April 2005-June 2005
Roadmaps submitted for NRC review	June 2005
Strategic Planning Council	July 2005
NRC reviews complete	August 2005
Finalize Roadmaps	September 2005



# Recent Accomplishments

- 1/04 Stardust flyby of comet Wild 2
- 1/04 MER Spirit and Opportunity Landings
- 4/04 Gravity Probe B Launch
- 7/04 Cassini-Huygens Saturn Orbit Insertion
- 7/04 Aura Launch
- 7/04 Selection of New Frontiers candidates
- 8/04 MESSENGER Launch
- 9/04 Genesis sample return
- 11/04 SWIFT Launch
- 12/04 Selection of LRO instruments
- 12/04 Selection of MSL instruments
- 1/05 Deep Impact Launch
- 1/05 Huygens descent into Titan



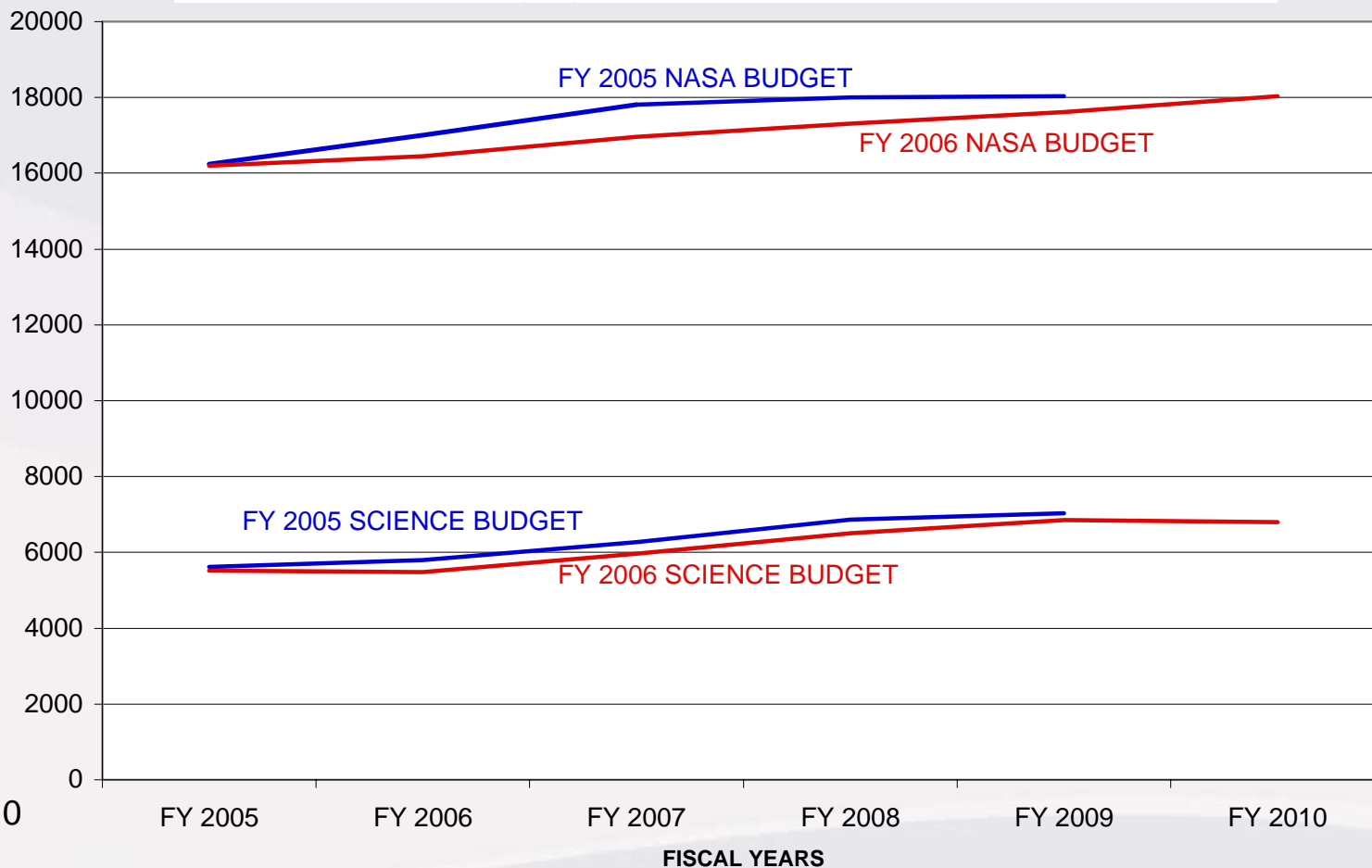
# Upcoming Milestones

- 4/05 SOFIA first flight**
- 5/05 NOAA N Launch**
- 5/05 GOES N Launch**
- 6/05 New Millenium ST-6 Launch**
- 7/05 Cloudsat/Calipso Launch**
- 7/05 Deep Impact encounter with Tempel-1**
- 7/05 Astro-E2 Launch**
- 7/05 CINDI Launch**
- 8/05 Mars Reconnaissance Orbiter Launch**
- 8/05 GP-B end of primary mission**
- 9/05 Twins-A Launch**



# Budget Comparison: FY2005 President's Budget vs. 2006 President's Budget

(\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
<b>SCIENCE</b>	<b>5,476</b>	<b>5,960</b>	<b>6,503</b>	<b>6,853</b>	<b>6,798</b>
Solar System Exploration	1,900	2,348	2,832	2,999	3,066
The Universe	1,512	1,532	1,539	1,495	1,407
Earth-Sun System	2,064	2,081	2,132	2,359	2,325



# Upcoming Opportunities

- **ROSES Opportunities in Solar System Exploration Research**

- Mars Fundamental Research 4/15/2005
- Discovery Data Analysis 4/18/2005
- Outer Planets Research 4/27/2005
- Planetary Atmospheres 4/29/2005
- Planetary Geology and Geophysics 5/6/2005
- Cosmochemistry 5/20/2005
- Origins of Solar Systems 5/27/2005
- Near Earth Object Observations 6/3/2005
- Sample Return Laboratory Instruments and Data Analysis 6/3/2005
- Planetary Astronomy 6/10/2005
- Astrobiology Science & Technology for Exploring Planets 7/29/2005
- Astrobiology: Exobiology and Evolutionary Biology 8/5/2005
- Planetary Protection Research 8/5/2005
- Planetary Instrument Definition And Development 8/5/2005
- Mars Data Analysis 8/12/2005
- Astrobiology Science and Technology Instrument Development 12/9/2005
- Planetary Major Equipment (add on)
- Carl Sagan Fellowships for Early Career Researchers (add on)

- **Discovery AO - To be issued in Spring 2005**

- **Mars Telecom Orbiter Instrument(s) AO - To be issued in Late Spring 2005**

- **Robotic Lunar Exploration Mission #2 AO**

