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**Statement of  
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before the  
Subcommittee on Science, State, Justice, and Commerce, and Related Agencies  
Committee on Appropriations  
House of Representatives**

Mr. Chairman and Members of the Subcommittee, thank you for this opportunity to appear today to discuss NASA's plans for the future as represented in the President's FY 2006 budget request for NASA. I will outline the major budget highlights and discuss NASA's transformation progress and strategic direction, and describe how exciting the Nation's future will be in exploration and discovery.

As Members are aware, on January 14, 2004, President George W. Bush announced the *Vision for Space Exploration*. The President's directive gave NASA a new and historic focus and clear objectives. The fundamental goal of this directive for the Nation's space exploration program is "...to advance U.S. scientific, security, and economic interests through a robust space exploration program." In issuing this directive, the President committed the Nation to a journey of exploring the solar system and beyond, returning humans to the Moon, and sending robots and ultimately humans to Mars and other destinations. He challenged us to establish new and innovative programs to enhance our understanding of the planets, to ask new questions, and to answer questions as old as humankind. NASA enthusiastically embraced this directive and immediately began a long-term transformation that will enable us to achieve this goal.

In June 2004, the President's Commission on Implementation of the United States Space Exploration Policy, led by E. C. "Pete" Aldridge, Jr. (the Aldridge Commission), reported its findings and recommendations to the President. The Aldridge Commission emphasized the crucial role that technological innovation, national and international partnerships, and organizational transformation must play if we are to implement the President's *Vision* for an affordable and sustainable space exploration program. NASA is committed to making the necessary transformation to ensure our success in achieving the *Vision*.

The President demonstrated his commitment to the *Vision* by making it a priority in his FY 2005 budget request, and Congress responded positively by providing funding for NASA at the level requested by the President. The President has reaffirmed his commitment to the *Vision* by also making it a priority in his

FY 2006 budget request. The \$16.46 billion requested for NASA is an increase of 2.4 percent over FY 2005 in a very challenging budget environment.

### **Exploration *Vision* is Well Underway**

Over the past year, NASA has made great strides in implementing the *Vision*:

- *Returning to Flight* – We are making final preparations for Shuttle return-to-flight as early as next month and Space Station is entering its fifth year of continuous presence on-orbit.
- *Exploring our Solar System and the Universe* – The Mars twin rovers are exceeding all expectations and making unprecedented discoveries; the Cassini/Huygens mission is providing stunning views of Saturn and Titan; the Genesis mission has returned primordial samples from space; new missions have been launched to Mercury and comets; amazing discoveries continue with Hubble, Chandra and Spitzer; and we have completed deployment of the Earth Observing System.
- *Laying the Groundwork for the Future* – We have had overwhelming interest in our exploration efforts with 5,000 letters of interest, 600 proposals submitted, and competitive awards of 118 contracts for exploration technologies. Also, initial contracts have been awarded as we prepare for major milestones in 2008 including an unprecedented mapping of the moon with the Lunar Reconnaissance Orbiter, a technology demonstration flight of the Crew Exploration Vehicle, and a planned ground-based nuclear reactor test for Prometheus Nuclear Systems and Technology.
- *Engaging the Public* – All of these accomplishments have created even greater excitement for space exploration since the President's announcement of the *Vision*. Indeed, the incredible 17 billion hits on the NASA web site over the past year is a testament to the intense public interest.

### **Funding Based on Long-Term Affordability**

In his February 2nd State of the Union Address, the President underscored the need to restrain spending in order to sustain our economic prosperity. As part of this restraint, it is important that total discretionary and non-security spending be held to levels proposed in the FY 2006 Budget. The budget savings and reforms in the Budget are important components of achieving the President's goal of cutting the budget deficit in half by 2009 and we urge the Congress to support these reforms. The FY 2006 Budget includes more than 150 reductions, reforms, and terminations in non-defense discretionary programs, of which 3 affect NASA programs. The Agency wants to work with the Congress to achieve these savings.

To achieve the *Vision for Space Exploration*, NASA is proceeding, as directed by the President, to plan and implement a sustainable and affordable, integrated robotic and human exploration program, structured with measurable milestones, and executed on the basis of available resources, accumulated experience, and technology readiness. NASA views human and robotic explorers as partners in achieving the *Vision*. Last year, we provided a long-range roadmap through 2020 to address how such human and robotic exploration would remain affordable:

- Human explorers would return to the moon no later than 2020 based on innovative new designs that would be developed in ever increasing capabilities or "spirals." Major development of these hardware elements would commence later this decade, given the retirement of the Space Shuttle in 2010. These exploration elements would include needed launch vehicles, in-space transfer systems, lunar landers and habitation systems, and a Crew Exploration Vehicle (CEV) that would ferry humans

from Earth to the Moon and beyond. To prepare for development decisions of these elements, we would use the intervening years focusing on critical research and technology (R&T). Such R&T would encourage new innovations, and ensure development decisions that could deliver hardware at the promised cost and performance. Funding for the R&T this decade was largely achieved by terminating legacy human space flight projects, such as canceling the Space Launch Initiative in last year's budget, and focusing existing R&T investments on exploration requirements.

- Robotic explorers would continue the exploration of the solar system, traveling to places like Mars in anticipation of eventual human visits, and going to destinations that are more challenging, like Mercury, Saturn, Pluto, and comets. Observatories would be deployed to search for Earth-like planets and habitable environments around distant stars, and to explore the universe to understand its origin, structure, evolution, and destiny. Funding for these areas would significantly increase over the coming years with Science investments growing from 33 percent to 38 percent of the Agency's total budget.

These human and robotic explorers will enable our exploration and scientific plans. A recent report released on February 3, 2005, by the National Research Council entitled *Science in NASA's Vision for Space Exploration* states, "Exploration is a key step in the search for fundamental and systematic understanding of the universe around us. Exploration done properly is a form of science. Both robotic spacecraft and human spaceflight should be used to fulfill scientific roles in NASA's mission to explore."

### **Guided by Our Priorities**

Indeed, the President's FY 2006 budget request for NASA reaffirms the funding strategy outlined above. The FY 2006 budget identifies what is needed to proceed with the transformation of America's civil space program. It maintains resolute focus on key priorities, milestones, and schedules for the *Vision* introduced in the FY 2005 budget:

- First Step—Space Shuttle return to flight and completion of International Space Station assembly;
- Flagship Program—Constellation Systems including the 2008 Crew Exploration Vehicle flight demonstration;
- Technology Base—Critical exploration technologies;
- Transforming Technologies—Prometheus Nuclear Systems and Technology, including a planned flight demonstration in a decade;
- Robotic Precursors—Lunar missions beginning in 2008 and Mars missions added in 2011;
- Shuttle Transition—Space Station cargo and crew services via near-term commercial services and Shuttle retirement in 2010;
- Scientific Breakthroughs—Exploration of the solar system and the universe, such as the James Webb Space Telescope launch in 2011 and the search for Earth-like planets.

The FY 2006 budget also supports critical national needs in other areas:

- Aeronautics—Protecting priorities in aviation safety, security and airspace systems and focusing on high-payoff, "barrier-breaking" technology demonstration projects;
- Climate Change—Supporting investments in the Global Change Science and Technology Program and the next generation Earth observing satellites;
- Education—Continuing to inspire the next generation of explorers with programs like Explorer schools and scholarship for service.

To support the Administration's goal of reducing the deficit, NASA's budget was reduced \$0.5 billion in FY 2006 below the level planned last year for FY 2006. In addition, returning the Shuttle safely to flight costs \$0.4 billion more than previously estimated in FY 2006. To address these and other items the net result was \$0.4 billion (11 percent) less in Exploration Systems than previously planned for FY 2006, \$0.3 billion (5 percent) less in Science, \$0.1 billion (11 percent) less in Aeronautics, and \$0.2 billion (4 percent) more in Space Operations. These changes were not easy but, in the end, we made the tough decisions while protecting the priorities outlined above.

On December 21, 2004, the President signed a new national policy directive that establishes guidelines and implementation actions for United States space transportation programs and activities to ensure the Nation's continued ability to access and use space for national and homeland security, and civil, scientific, and commercial purposes. NASA will play a significant role in implementing this directive, fostering and enabling the development of space transportation capabilities for human space exploration beyond low Earth orbit, consistent with the goals of the *Vision for Space Exploration*.

### **Building on Our Scientific Successes**

The FY 2006 budget request of \$5.5 billion for the Science Mission Directorate will support 55 missions in orbit, 26 in development, and 34 in design phase. By 2010, the Science budget will increase by 23 percent over current levels.

The FY 2006 budget includes \$858 million (a 17 percent increase) for Mars and Lunar robotic exploration. The Mars rovers, *Spirit* and *Opportunity*, are exceeding all goals with their unprecedented discoveries and longevity. Last year, the rovers found definitive evidence of an ancient body of water on the Red Planet, and they continue to gather data more than a year after their successful landing. We recently awarded contracts for six instruments to be flown on the 2008 Lunar Reconnaissance Orbiter (LRO) that promises unprecedented mapping of the moon's surface. The 2008 LRO should revolutionize our understanding of the Moon to the same extent that the Mars rovers have transformed our understanding of Mars.

The budget also includes \$218 million to maintain competitive efforts for the Explorer Program, \$56 million (a 33 percent increase) for the Beyond Einstein program to study the universe, \$234 million for studying the Sun in the Living With a Star program, and \$136 million (a 26 percent increase) for competitive opportunities in the Earth System Science Pathfinder program. With our international partners, we also continue to add to the constellation of Earth-observing satellites that monitor our planet while extending our reach and presence further into the solar system. NASA launched Aura to look back at Earth and give us a better picture of our atmosphere and changing climate, and the entire Earth Observing System continues to return trillions of bytes of information about our dynamic Earth. In the future, NASA plans to develop a "sensor-web" to provide timely, on-demand data and analysis to users who can enable practical benefits for scientific research, national policymaking, economic growth, natural hazard mitigation, and the exploration of other planets in this solar system and beyond.

NASA will continue to expand our exploration reach with an armada of existing and new space observatories operating in many different wavelengths and looking at different parts of our exotic universe. The three "Great Observatories" - Hubble, Spitzer and Chandra - will continue to bring wondrous images to our eyes and exciting new scientific discoveries while we continue development of new tools for research like the James Webb Space Telescope and the Space Interferometry Mission that will vastly expand our understanding of the origin and evolution of the universe. Missions such as Kepler

will provide a new understanding and knowledge of the planets orbiting stars far from our solar system, perhaps identifying new targets for voyages of exploration by future generations of explorers.

This budget also includes \$372 million (a 19 percent increase) to maintain the Webb telescope on pace for a 2011 launch and \$93 million in development funds for the Hubble Space Telescope to extend its scientific productivity and initiate a robotic mission to safely de-orbit it. This investment in the Hubble, together with the synergistic use of the other two Great Observatories and combined with the greatly increased capability of ground-based assets and the emergent science of optical interferometry, will ensure many years of new scientific discoveries for the nation.

NASA decided to discontinue the effort on robotic servicing of the Hubble Space Telescope, and, based on analysis of the relative risks immediately following the loss of Columbia, also decided not to proceed with a Shuttle servicing mission. NASA's decision not to service the Hubble was a very difficult one given the Hubble's spectacular successes. When we return to flight, it will be with an essentially new vehicle. In light of what we learn after we return to flight, we will revisit the earlier decision. The Hubble will complete its originally planned 15-year mission this year and, with careful stewardship, should continue to operate for 2-3 additional years until its gyroscopes and batteries wear out. As it ages, other items may unexpectedly fail, such as the recent loss of one of the four scientific instruments, the Space Telescope Imaging Spectrograph (STIS). Nonetheless, although the spacecraft may have limited lifetime, NASA is fully committed to saving the associated science. NASA's FY 2006 budget request seeks to:

- (1) Operate Hubble as long as the spacecraft generates useful scientific data;
- (2) Develop techniques to extend its life;
- (3) Safely de-orbit the spacecraft after the end of Hubble's useful life;
- (4) Examine options for addressing some Hubble science such as re-hosting new or modified Hubble instruments on new space platforms;
- (5) Continue analysis of the archived data generated by Hubble; and,
- (6) Aggressively pursue development of the James Webb Space Telescope, which promises an exciting future of continued discovery.

NASA remains committed to our world-class program of astronomy.

### **Preparing for Our Exploration Future**

The FY 2006 budget request of \$3.2 billion for the Exploration Systems Mission Directorate includes \$753 million for continuing development of the Crew Exploration Vehicle, America's future spacecraft for safe and affordable human exploration, scheduled for a flight demonstration in 2008. The CEV promises safer travel for astronauts into space and continuing U.S. human access soon after retirement of the Shuttle. The CEV as well as launch vehicles for transport of the CEV and cargo to low Earth orbit, and any ground or in-space support infrastructure for communications and operations, is collectively known as the "System of Systems." This will be developed in a "spiral" approach, wherein early demonstrations and prototypes are used to demonstrate capabilities, validate technologies, and mitigate risk, all along an evolutionary path toward a mature design. The first spiral development planned will provide the capability to deliver humans to orbit in a CEV by 2014. The second spiral will deliver humans to the lunar surface by 2020, followed by the third spiral that will enable extended visits on the lunar surface. As spiral development evolves, System of Systems elements will grow to include in-space support systems, destination surface systems, and additional human support systems. NASA will be assessing design options for the Crew Exploration Vehicle, including the ability to dock with the International Space Station.

The FY 2006 budget request includes \$919 million (a 27 percent increase) for Exploration Systems Research and Technology that will enable designs for sustainable exploration, including \$34 million for a revamped technology transfer program and \$34 million for the Centennial Challenges prize program. The Agency continues to seek the support of the Congress for authorization to enable larger prize awards. This budget also includes \$320 million for Prometheus Nuclear Systems and Technology to support a new flight demonstration that is less risky and more affordable than the Jupiter Icy Moons Orbiter mission. In addition, the FY 2006 budget request provides \$806 million for Human Systems Research and Technology which has been restructured so its programs are now linked directly to exploration requirements for human missions to the Moon, Mars, and beyond.

### **Enabling Breakthrough Aeronautics Research**

The President's FY 2006 Budget fully supports the Aeronautics program's vital research, especially in the areas of emissions and noise reduction, increasing the Aviation safety and security, and increasing the capacity and efficiency of the National Airspace System. The budget request also supports the critical research activities that have been identified by the Joint Program and Development Office. NASA's FY 2006 request for the Aeronautics Research Mission Directorate is \$852 million. The President's FY 2006 budget increases the Aeronautics program's vital research in Aviation Safety and Security by 4 percent and Airspace Systems by 32 percent. These two priority programs are fully funded to ensure timely results critical to meeting national goals, especially those efforts in support of the interagency Joint Planning and Development Office (JPDO). This is a consortium of government agencies, of which NASA is a principal member, chartered to transform the U.S. air transportation system by the year 2025. Participants include Departments of Defense, Homeland Security, Commerce, and Transportation.

To ensure maximum benefit to the taxpayer, we are transforming part of our investment in Aeronautics Research in order to more sharply focus the investment on breakthrough technologies. Toward this end, the NASA Aeronautics Vehicle Systems Program has been restructured from the current emphasis on numerous projects aimed at incremental improvements. Instead, the program is moving toward a smaller and more focused set of four projects seeking to achieve near-term flight demonstrations of revolutionary and barrier breaking technology: (1) reducing the noise of conventional aircraft to within the airport boundary; (2) reducing the supersonic boom allowing future supersonic aircraft to fly over land without the restrictions in place today; (3) developing electric propulsion systems for aircraft that eliminate pollution entirely because they do not burn hydrocarbon fuels; and, (4) demonstrating high altitude, long endurance, remotely operated or autonomous aircraft to create opportunities for new applications including scientific platforms. The \$459 million program request for FY 2006 will fully fund these four projects. In concert with the Agency transformation, this program will be conducted using a higher level of competitively awarded research. We believe that this new focus and new way of performing the research will enhance the value of our vehicle research to the taxpayer.

As we move forward, a broader national dialog on aeronautics R&D goals may be appropriate as we enter the second century of aviation. These discussions should include a range of stakeholders and customers, including the Congress. This process could lead to a national consensus for aeronautics R&D goals..

### **Meeting Our Obligations**

The FY 2006 budget request of \$6.8 billion for the Space Operations Mission Directorate reflects the first step in the *Vision*: returning the Space Shuttle safely to flight and resuming flight operations. The budget

includes \$4.5 billion to return the Shuttle safely to flight and maintain safe operations in support of five planned flights. NASA will retire the Space Shuttle in 2010. The FY 2006 budget also provides \$1.9 billion for the International Space Station. NASA currently is examining configurations for the Space Station that meet the needs of the *Vision for Space Exploration* and our international partners and require as few Shuttle flights as possible to complete assembly. A key element in the future of the International Space Station program is the purchase of alternate cargo and crew transportation services to supplement the Shuttle when it is in service, and to replace it when it retires. The budget provides \$160 million for these services in 2006 and NASA intends to solicit a Request for Proposal for commercial cargo transportation services to the Station this summer.

We are making final preparations to return the Space Shuttle safely to flight in 2005. We have made more than 100 major maintenance modifications and upgrades to *Discovery* and its supporting systems, including new cabling and wiring that will support leading edge sensors, a digital camera, and a boom extension for the Shuttle's robotic arm that will enable us to inspect nearly all the outside areas of the orbiter's Thermal Protection System during missions. Technicians installed the Forward Reaction Control System and the Reinforced Carbon-Carbon Nose Cap, and 88 sensors are being installed on each wing; 66 will measure acceleration and impact data, and 22 will take temperature data during *Discovery's* journey. *Discovery* and its propulsion elements are now at the launch pad and undergoing the final tests and checks required prior to a launch, which is scheduled for not earlier than May 15, 2005. The return of the Shuttle to flight is a key milestone and we are committed to keeping human space flight as safe as possible.

As the United States implements the *Vision for Space Exploration*, the Administration recognizes the value of effective cooperation with Russia to further our space exploration goals. At the same time, we have to appropriately reflect U.S. nonproliferation policy and objectives in our relationship with Russia. The Administration is thus interested in seeking a balanced approach that continues to protect our nonproliferation goals while advancing potential U.S. cooperation with Russia on the *Vision for Space Exploration*. Such a balanced approach must include the Iran Nonproliferation Act of 2000 (INA), which currently complicates cooperation with Russia on the International Space Station (ISS), and will also have an adverse impact on cooperation with Russia on our future space exploration efforts related to human space flight. To that end, the Administration looks forward to working with Congress to ensure that the Vision for U.S. Space Exploration is able to succeed while remaining fully consistent with broader U.S. national security and nonproliferation goals.

This year, we began our fifth year of continuous astronaut presence on the Space Station. Astronauts continued their international cooperation onboard the Station through a variety of joint research activities. Just last month, agency leaders from the U.S., Russia, Japan, Europe, and Canada met in Montreal, Canada to discuss Station cooperative activities. At the meeting, the Station partnership unanimously endorsed completion of this orbiting laboratory by the end of the decade.

### **Building the Pipeline for Future Careers**

The FY 2006 budget request of \$167 million for the Office of Education reflects NASA's continued commitment to developing the next generation of explorers by inspiring and motivating students and educators at all levels in the formal and informal education communities to pursue careers in science, technology, engineering, and mathematics. We will achieve this goal by providing unique teaching and learning experiences, as only NASA can, through the Agency's research and flight missions. Students and educators will be able to work with NASA and university scientists to use real data to study Earth, explore Mars, and conduct scientific investigations. They will work with NASA engineers to learn what it takes to develop technological breakthroughs required to reach the farthest regions of the solar system

and to live and work in space. To ensure diversity in NASA's future workforce, the education programs pay particular attention to under-represented groups. NASA will continue to support the Nation's universities to educate more students in science and engineering by providing meaningful research and internship opportunities for qualified students, plus a roadmap for students seeking NASA careers. The FY 2006 budget continues emphasis on priority initiatives: NASA Educator Astronaut, NASA Explorer Schools, NASA Explorer Institutes, and Science and Technology Scholarship Program. Exploration advances knowledge.

### **The *Vision* is Transforming NASA**

To achieve the *Vision for Space Exploration*, NASA is engaged in a major transformation—taking the extraordinary capabilities we have throughout the Agency and restructuring them to achieve the goals of the 21st century. This is an enormous challenge, but in less than a year, we have begun to transform our entire organization to foster permanent change and making a positive, mission-driven culture. We are creating an environment of openness and free-flowing communication by continuing to assess our leadership practices. We also are sure that the entire NASA family is headed in the same direction.

The focus of the transformed NASA is on how best to achieve the *Vision* and other national priorities assigned to our Agency. Guided by NASA's core values of Safety, the NASA Family, Excellence, and Integrity, the Agency's transformation is:

- *Embedding a Safety Culture* – NASA is continuing to foster its safety culture throughout the organization. The Agency has reduced workforce accident rates to industrial world-class standards and implemented an Independent Technical Authority (ITA) and NASA Engineering and Safety Center (NESC) to guide NASA's continued safety improvements. NASA's FY 2006 budget assumes \$87 million in Center service pool budgets to support the ITA functions. The budget also includes \$79 million for the NESC (a 21 percent increase).
- *Embracing Competition* – NASA is embracing competition as a way to elicit the best from the NASA's Centers, industry, and academia. The Agency is using competitive processes to encourage more cost-effective, innovative solutions to the scientific and technical challenges presented by the *Vision*. Over the past year, competitive selections in exploration have demonstrated increased collaboration between NASA's Centers and industry and academia. The budget provides well over \$10 billion in new competitive opportunities over the next five years.
- *Enhancing Strategic Planning* – In a new document released with our FY 2006 budget request, *The New Age of Exploration: NASA's Direction for 2005 and Beyond*, we outline NASA's commitment to change and to achieving the *Vision*. This document establishes NASA's long- and short-term objectives, supports our re-mapped FY 2005 Performance Plan, and underpins the structure and strategy of our FY 2006 budget. NASA's 2006 Strategic Plan – to be released next February with the FY 2007 budget request – will be informed by the strategic and capability roadmaps currently being developed by national teams of experts from academia, industry, other government agencies, and NASA.
- *Improving Decision-Making* – Our transformed Headquarters organization includes a Strategic Planning Council and a supporting Advanced Planning and Integration Office to enable better long-range planning, an Operations Council to integrate NASA's tactical and operational decisions, and a transformed NASA Advisory Council to integrate Agency activities. We have streamlined our corporate structure by reducing the number of headquarters organizations by half to four Mission Directorates and eight Mission Support Offices.

- Reinvigorating Field Centers* – NASA has identified Core Competencies, involving human capital and physical assets, which must be sustained within NASA in order for the Agency’s mission to be achieved. These specific Organizational Core Competencies are resident at one or more NASA Centers and funded primarily through competitive means. Every three years, these Competencies will be assessed as a part of the Agency’s strategic planning process, and may be changed in response to changing mission requirements, emerging commercial capabilities, and/or competitive results. NASA’s Centers will build long-term business plans based on the *Vision for Space Exploration*, strengthen institutional capabilities around Core Competencies, and remain at the cutting edge through competitive opportunities. NASA Centers will also be examining alternative management structures to enhance organizational agility and to foster new business opportunities.
- Transforming Human and Physical Capital* – As NASA sets its sights on exciting worlds beyond, NASA will require a workforce and facilities with the right mix of world-class capabilities. The Agency is actively engaged in a multi-faceted approach to shape the workforce of the future, and to align its physical assets in support of current and future mission needs. The need to reshape workforce and align physical assets is not a new challenge for NASA, but with the Vision, we are now provided the necessary long-term direction to guide the transformation. In response to all these challenges, NASA will use 2005-2006 as a transition period for Centers to reshape and rebalance its workforce and facilities. The Agency is undertaking a number of targeted workforce activities to ensure the relevant skills are available to accomplish the mission. Additionally, it is taking steps to identify underutilized infrastructure that could possibly be replaced with state-of-the-art facilities providing greater utility or a lower cost burden to the Centers. Before closing any facilities, NASA will be coordinating with other users and government agencies to determine the demand for underutilized facilities. In the near future, NASA will propose a set of legislative initiatives as part of the Agency’s draft FY 2006 Authorization Bill that will enhance the Agency’s transformation in support of the *Vision*.
- Implementing Improved Program Management Procedures* –The Agency is implementing improved cost estimating and earned value management procedures to ensure we meet our cost commitments. We are also establishing an acquisition strategy approval process that will draw on the best processes from the Department of Defense and prior NASA acquisition policies. This is to ensure that before contract award, all acquisition programs and projects will satisfy the requirements and that the acquisition strategies, if done as planned, are executable, have exit and entrance criteria, contain clear approval milestones, and involve independent reviews.
- Improving Financial Management* — For the past 2 years, NASA has received a disclaimer of audit opinion on its annual financial statements due largely to two issues – financial system conversion, and accounting for property, plant and equipment, and materials and supplies. In FY 2003, NASA converted the 10 separate NASA Center accounting systems and the associated 120 subsidiary systems, along with over 12 years of historical financial data, into one single integrated agencywide core accounting system. Problems associated with this conversion have been greater than expected and are taking longer than expected to correct. Accounting for property and materials and supplies valued at \$37.6 billion (83 percent of NASA’s assets on the balance sheet) lacks the necessary internal controls and systems to support valuation for management and audit purposes. NASA understands the seriousness of these issues and has developed work plans to overcome these and other material issues, however it will take time to implement all of the corrective actions. NASA anticipates that improved audit results could be achieved on the FY 2006 financial statements with a reduction in the number of material weaknesses and reportable conditions.

## **The Nation's Future in Exploration and Discovery**

The torch is being passed from the pioneers, who first took us to the Moon and beyond, to the new generation of explorers who will take us into deep space to stay. A new era in space exploration begins with the return to flight of the Shuttle and the completion of the International Space Station, as we begin a journey that will take the next generation of Americans back to the Moon, to Mars, and beyond. We will also be pursuing ever more aggressive plans with advanced robots and space observatories that will require this nation's most sophisticated technical capabilities.

This generation inherited great legacies from the exploratory voyages and discoveries of earlier centuries. It is our responsibility to ensure that future generations inherit from our journey a similar legacy of achievement and inspiration. Implementing the *Vision* will provide this legacy. The FY 2006 NASA budget reaffirms the President's commitment and allows us to take the next step in implementing the *Vision*.

As President George W. Bush said, "We choose to explore space because doing so improves our lives and lifts our national spirit. So let us continue the journey."

<b>(Budget authority, \$ in millions)</b>		<b>FULL COST</b>					
By Appropriation Account		Initial Operating Plan 12/23/04					
By Mission Directorate By Theme		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
<b>Science, Aeronautics, and Exploration</b>		<b>9,334.7</b>	<b>9,661.0</b>	<b>10,549.8</b>	<b>11,214.6</b>	<b>12,209.6</b>	<b>12,796.1</b>
<b>Science*</b>		<b>5,527.2</b>	<b>5,476.3</b>	<b>5,960.3</b>	<b>6,503.4</b>	<b>6,853.0</b>	<b>6,797.6</b>
Solar System Exploration		1,858.1	1,900.5	2,347.7	2,831.8	2,998.9	3,066.1
The Universe		1,513.2	1,512.2	1,531.5	1,539.4	1,495.0	1,406.7
Earth-Sun System		2,155.8	2,063.6	2,081.2	2,132.2	2,359.0	2,324.8
<b>Exploration Systems**</b>		<b>2,684.5</b>	<b>3,165.4</b>	<b>3,707.0</b>	<b>3,825.9</b>	<b>4,473.7</b>	<b>5,125.5</b>
Constellation Systems		526.0	1,120.1	1,579.5	1,523.7	1,990.9	2,452.2
Exploration Systems Research and Technology		722.8	919.2	907.3	989.2	1,050.3	1,078.5
Prometheus Nuclear Systems and Technology		431.7	319.6	423.5	500.6	614.0	779.0
Human Systems Research and Technology		1,003.9	806.5	796.7	812.4	818.5	815.8
<b>Aeronautics Research</b>		<b>906.2</b>	<b>852.3</b>	<b>727.6</b>	<b>730.7</b>	<b>727.5</b>	<b>717.6</b>
Aeronautics Technology		906.2	852.3	727.6	730.7	727.5	717.6
<b>Education Programs</b>		<b>216.7</b>	<b>166.9</b>	<b>154.9</b>	<b>154.7</b>	<b>155.4</b>	<b>155.4</b>
Education Programs		216.7	166.9	154.9	154.7	155.4	155.4
<b>Exploration Capabilities</b>		<b>6,704.4</b>	<b>6,763.0</b>	<b>6,378.6</b>	<b>6,056.7</b>	<b>5,367.1</b>	<b>5,193.8</b>
<b>Space Operations</b>		<b>6,704.4</b>	<b>6,763.0</b>	<b>6,378.6</b>	<b>6,056.7</b>	<b>5,367.1</b>	<b>5,193.8</b>
International Space Station		1,676.3	1,856.7	1,835.3	1,790.9	2,152.3	2,375.5
Space Shuttle		4,543.0	4,530.6	4,172.4	3,865.7	2,815.1	2,419.2
Space and Flight Support		485.1	375.6	370.9	400.0	399.7	399.1
<b>Inspector General</b>		<b>31.3</b>	<b>32.4</b>	<b>33.5</b>	<b>34.6</b>	<b>35.2</b>	<b>37.3</b>
<b>TOTAL</b>		<b>16,070.4</b>	<b>16,456.3</b>	<b>16,962.0</b>	<b>17,305.9</b>	<b>17,611.9</b>	<b>18,027.1</b>
Year to year increase			2.4%	3.1%	2.0%	1.8%	2.4%
Emergency Hurricane Supplemental		126.0					