

**Statement of**

**Michael D. Griffin**

**Administrator,  
National Aeronautics and Space Administration**

**Senate Subcommittee on Space, Aeronautics and Related Sciences  
FY 2008 Budget Hearing**

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Chairman Nelson, Senator Hutchison, and Members of the Subcommittee, thank you for inviting me here today to discuss NASA's \$17.3 billion FY 2008 budget request. This request demonstrates the President's commitment to our Nation's leadership in space exploration, scientific discovery, and aeronautics research, and I very much hope you will support it.

Last week, on February 20<sup>th</sup>, was the 45<sup>th</sup> anniversary of Mercury astronaut John Glenn's Friendship 7 mission, when he became the first American to orbit the Earth. Glenn's achievement was born of the Cold War rivalry between the United States and the former Soviet Union, when human spaceflight was first realized to be a strategic capability for our Nation. This former rivalry has become a fruitful partnership. Just last week onboard the International Space Station, Expedition 14 Commander Michael Lopez-Alegria and Russian cosmonaut Mikhail Tyurin worked together to complete their expedition's fifth spacewalk, retracting a stuck

antenna on a Russian Progress spacecraft, and checking out navigation aids for the upcoming launch of the European ATV cargo supply ship.

The cause of space exploration binds many nations together, and today, the United States is a recognized leader because successive Presidents and Congresses worked together in the past to make the right strategic decisions for our Nation's future in space. But our leadership in space and aeronautics is not a birthright; it is not something we can take for granted, it is not an arena in which we can rest on our laurels simply because we have done great things in the past. It is something we must strive to earn every day. We at NASA need the help of the Congress to provide the resources necessary to maintain that leadership.

This Committee demonstrated such leadership in the forging of the NASA Authorization Act of 2005. A framed copy of that landmark legislation hangs on the wall outside my office. I am grateful to the Congress for providing a strategic direction for NASA that will serve our Nation well for the next several decades. We have made a great deal of progress since I appeared before this Committee last year. The FY 2008 budget request makes no major changes to those carefully considered plans, offering only minor course corrections. We intend no surprises for you.

We safely carried out three Space Shuttle missions last year. I am joined here today by the crew of the Space Shuttle mission who flew last December on

the first night Shuttle launch since the *Columbia* tragedy. We are continuing assembly of the Space Station, and it is the hard work and dedication of astronauts like those here today who are making it possible. As you know, we had to scrub the planned March launch opportunity for Shuttle *Atlantis*, commanded by Marine Colonel Rick Sturckow, because of hail damage to the Shuttle External Tank. We're rolling the stack back to the VAB to fix it, and the next launch window for STS-117 opens on April 22nd. I invite the Members of this Committee to view that launch if your schedules permit.

By March 15th, I plan to provide the Committee a revised FY 2007 spending plan based on the recently enacted FY 2007 joint resolution. Quite simply, \$545 million less funding than NASA's original FY 2007 request means that there will be impacts to people, projects, and programs. Moreover, NASA's human spaceflight enterprise has been directed to respond to the \$545 million Agency reduction by absorbing a cut of nearly \$700 million from the FY 2007 request. I must inform you that this reduction jeopardizes NASA's ability to manage an effective transition from the Space Shuttle to the new *Orion* and *Ares* crew launch systems. While the appropriation reduction does not halt any work planned for the remaining months of FY 2007, it does adversely impact work planned in 2008-10, as the work on *Orion* and *Ares* system ramps up. I am working through the many issues associated with the FY 2007 appropriation, and I will keep you fully

informed of what I believe to be the steps required to balance the competing priorities for scarce resources, and manage our Nation's civil space program effectively.

I cannot sugarcoat the issue; sacrifices will be made. Last year, we had to moderate the top line budget growth in our science portfolio, and stretch out the schedule for bringing the new human spaceflight systems on-line, in order to make up the difference in previously estimated "placeholder" costs for the Space Shuttle and International Space Station. While the NASA Authorization Act directs the Agency to develop the capability of "launching the Crew Exploration Vehicle as close to 2010 as possible," the best we may be able to achieve with the resources provided and projected for us is to hold the Presidentially-mandated date of "not later than 2014." And even that target date is in jeopardy – we are working through the necessary budget and technical tradeoff analyses based on the FY 2007 appropriation as I sit here today.

Due to limited funding, we have also deferred a great deal of research to be done on the Space Station, and minimized the number of Space Shuttle flights to critical ISS missions, and one last Hubble servicing mission, before retiring the Shuttle in 2010. NASA is actively soliciting other U.S. government agencies for their interest in conducting research on the Space Station over and above NASA's ability to fund such research in support of its role as a National Laboratory.

Some have asked why we should not simply continue flying the Space Shuttle past 2010, and so I would like to address that issue here. In analyzing not only the root causes, but also the systemic reasons behind the Space Shuttle *Columbia* accident, the Columbia Accident Investigation Board (CAIB) made some critical observations that guided the formulation of the Vision for Space Exploration.

First, the CAIB noted that “The U.S. civilian space effort has moved forward for more than 30 years without a guiding vision.” Again, I want to thank you, Senators Hutchison and Nelson, for bringing your leadership to bear on this issue with the NASA Authorization Act. Second, the CAIB observed “because the Shuttle is now an aging system but still developmental in character, it is in the nation’s interest to replace the Shuttle as soon as possible as the primary means for transporting humans to and from Earth orbit.” Third, “the previous attempts to develop a replacement vehicle for the aging Shuttle represent a failure of national leadership.” And finally, the Board noted that “this approach can only be successful: if it is sustained over the decade; if by the time a decision to develop a new vehicle is made there is a clearer idea of how the new transportation system fits into the nation’s overall plans for space; and if the U.S. government is willing at the time a development decision is made to commit the substantial resources required to implement it.”

I believe that all of us need to be mindful of these carefully-considered observations in our goal of flying the Space Shuttle safely, using it to assemble the International Space Station, retiring the Shuttle in 2010, and bringing new U.S. human spaceflight capabilities on-line. With those observations in mind, we chose to fly the Shuttle only for missions to which its capabilities were uniquely suited. Continuing to fly the Shuttle past 2010 for Space Station cargo logistics and crew rotation ignores the sound logic expressed by the CAIB. Given the Shuttle's high fixed operating costs of approximately \$3 billion/year, continuing to operate the Shuttle would only serve to delay the development of a new U.S. transportation capability which can support both the Space Station and the larger exploration program. Additionally, current Shuttle funding levels require termination of contracts for key Shuttle system components. Bringing these Shuttle systems back on-line, or continuing them, would involve even higher costs, which would further delay development of the new systems. We do not want to do this. It is our job to meet the technical challenges of delivering the next generation of U.S. space transportation. This will require technical discipline, consistent funding, and adherence to the leadership evidenced in our Authorization Act.

In the interim period between Shuttle retirement and bringing *Orion* and *Ares* on-line, we will rely on commercial and international crew and cargo transportation services to and from the Space Station. But the length of this

interim period must be limited. We must not repeat the mistakes of the 1970s as we proceed to retire the Space Shuttle and transition to *Orion* and *Aries* operations. I recall at first hand the damage suffered by our Nation's space program with the unintended loss of critical expertise during and immediately following the 1975-81 gap between Apollo and Shuttle. When major cutbacks occurred in NASA operations in the early 1970s, the area around Kennedy Space Center suffered greatly, with 13% unemployment and over 1,000 repossessed homes, as former Apollo workers simply walked away from homes for which there were no buyers. The highly skilled expertise across the Nation that was lost never returned to the aerospace industry, and today, we face a shortage of qualified engineering talent, a situation recently addressed in an extended piece in one of our most sober trade journals.

Human spaceflight is a strategic asset for our Nation, and should not again be risked as it was during the Apollo/Shuttle transition. This must be a safe and orderly transition. Again, this is NASA's greatest management challenge, and we will need the help of the Congress to do it well. Beyond our FY 2008 budget request, we have prepared a package of legislative and administrative tools that will help us in the transition from the Space Shuttle to the new systems. The Space Shuttle program uses over 650 facilities with a replacement value of almost \$5.7 billion and over 980,000 pieces of equipment that cost almost \$12 billion. We will

not need so many facilities and equipment for our new Exploration systems, and so we are asking Congress for the legislative authority to maximize the advantage of some of this investment through leasing of underutilized facilities and related equipment. Given the FY 2007 appropriation, we need this legislative authority now more than ever, and I hope to work with you in the weeks and months ahead to get those provisions enacted.

Turning to our Science portfolio, our budget request for FY 2008 is over \$5.5 billion, allowing us to carry out a balanced portfolio of world-class missions in Earth science, heliophysics, planetary science, and astrophysics, based on priorities established by the National Academy of Sciences decadal surveys. During FY 2008 alone, NASA plans to launch ten missions, most of them in partnership with other U.S. Government agencies and international collaborators. With over 50 missions currently in operation, NASA operates an armada of spacecraft and instruments. In fact, today, NASA's New Horizons spacecraft will make its closest pass to the planet Jupiter, allowing a gravity-assist acceleration on its journey to Pluto and the Kuiper belt, at the very edge of our solar system.

Last December, the President approved the Nation's first Aeronautics R&D Policy. Consistent with this policy, NASA's Aeronautics Research budget request for FY 2008 sets priorities for aeronautics research that includes long-term foundational research across a breadth of core aeronautics competencies; research



in key areas related to the development of advanced aircraft technologies and systems, including those related to aircraft safety, environmental compatibility, and fuel efficiency; and research that supports the Next Generation Air Transportation System in partnership with the Joint Planning and Development Office. Further, we are addressing the needed maintenance and upgrades for aeronautical test facilities that are of vital importance to the Nation. Adjusting for simplified full cost accounting, NASA's aeronautics research budget increases by \$205 million for FY 2008-11 compared to last year's budget runout, a robust, stable profile. However, since the Congress chose to cut back on human spaceflight and to increase aeronautics research from the President's FY 2007 request, we are in the process of determining what additional aeronautics research we will conduct. Again, we will keep you informed as to how we plan to carry out this direction.

In closing, Chairman Nelson, I'd like to finish with a concern that I've recently raised in various speeches to the space community. I think the concern needs a wider audience. I've reached the point where I firmly believe that, if NASA were to disappear tomorrow, if the American space program were to disappear, if we never put another human into space, never put up another Hubble, never sent another spacecraft to another planet, most Americans would be profoundly distraught. We would feel less than ourselves, that our best days were

behind us, that the future would be dimmer than the past, that we had let something important to our Nation simply slip away. As you know better than most, NASA's budget leverages a much broader image of American well being than its mere size would lead one to believe. We have a tremendous responsibility to deliver the leadership that the Nation desires.

Last week, we celebrated the 45<sup>th</sup> anniversary of John Glenn's achievement. We celebrate that milestone because we should periodically take stock of how far we've come, how we got there, and where we're heading. Our leadership in space exploration, scientific discovery, and aeronautics research is strategically important to this Nation. We must not take that leadership for granted simply because we have done great things in the past. The \$17.3 billion budget request for NASA in FY 2008 demonstrates the President's commitment to maintaining that leadership, and I ask for your support in obtaining it.

Thank you.