

Highlights of NASA's FY 2009 Budget Request

Shana Dale
Deputy Administrator
National Aeronautics and Space Administration
Feb. 4, 2008

Good afternoon. I have some brief remarks to make and then I will take your questions.

This morning, the president announced the Fiscal Year 2009 budget for the entire federal government. Six-tenths of one percent of that budget is NASA. The president's request for NASA is \$17.6 billion, a 1.8 percent increase over the FY2008 enacted budget, along with a steady, five-year runout that includes an increase each year of around 2.4 percent. This increase demonstrates the president's commitment to funding the balanced priorities he set forth for the agency in space exploration, Earth and space science, and aeronautics research. We are making steady progress in achieving these goals.

Last week, all of us in the NASA family took a moment to reflect on the loss of the crew of the space shuttle Columbia five years ago, and how this tragedy led to a reexamination of our space program. The result was a unifying vision that first honors our commitments with our partners on the International Space Station before we embark on brave new journeys beyond low earth orbit – to the moon, Mars, and further in the solar system.

We returned the space shuttle to flight, and we hope to launch again when we are ready, hopefully later this week. Mike Griffin is down at the Cape taking part in the Mission Management Team meetings in preparation for the next flight.

NASA flew three shuttle missions last year—all successfully, and we plan to conduct five this year, installing the European and then the Japanese laboratory modules, and then later conducting the final servicing mission for the Hubble Space Telescope.

We are committed to meeting the requirements of this new exploration agenda. Thus, we are taking the steps necessary to retire the space shuttle in 2010 and transition our human space flight efforts to the Orion crew exploration vehicle and Ares I crew launch vehicle, and starting development in earnest of the Ares V and Altair lunar lander in 2011.

With full funding for Orion and Ares I provided by the Congress this year and the budget currently projected to be available for NASA, our best estimates still maintain an initial operational capability for the Orion and Ares I of March 2015. NASA will again need its full funding request this year in order to maintain that schedule, though the Constellation team strives to bring the Orion and Ares I on-line sooner.

While it will require a great deal of sacrifice of time and effort from many thousands of people in NASA and industry across this great country to turn this unifying vision into a reality, it also requires a sustained commitment from all of us to ensure that our nation is once again pushing the boundaries of our solar system through a robust exploration program and maintaining our strategic capabilities by being first in space.

NASA completed a systems definition review for Constellation last year, and we are proceeding to PDR this summer. After the Hubble servicing mission, the space shuttle team will hand over Launch Pad 39B at Kennedy Space Center to the Constellation team so they can conduct a test launch of the Ares I next year. Significant progress has been made, but we have a long way yet to go. Again, we will need the funding resources and a lot of hard work on everyone's part to make this happen.

Thus, the FY 2009 budget does not make any strategic changes in direction for our human spaceflight efforts to complete assembly of the International Space Station before embarking on new journeys to our moon and worlds beyond with our international partners. We must simply keep our focus and carry out these ambitious endeavors as credibly, affordably, and

effectively as possible. This is what the mantle of leadership in space exploration requires of us, and it is our greatest challenge.

Now is also the time to make provisions for the contributions of the commercial space sector to our nation's overall space enterprise. The development of space simply cannot be "all government, all the time." NASA's budget for FY 2009 provides \$173 million for entrepreneurs—from big companies or small ones—to develop commercial transport capabilities to support the International Space Station. With over \$2.6 billion in NASA funds available over the next five years to purchase cargo and crew services to support ISS operations, we would much rather be using this money to purchase cargo and crew services from American commercial companies than foreign entities.

While I do not like the idea that the United States may have no option other than to purchase crew transport services from Russia between the retirement of the shuttle and the beginning of Orion operations, I am glad that the Russians are our partners and have such capabilities, because the consequences if they were not available are far worse. If NASA astronauts were not onboard the ISS, our national laboratory in space simply would not survive. If there is no ISS, there is no market for the commercial providers we are trying to help bring into existence, and our international partnership would simply fall apart. For this reason, NASA may need to purchase additional crew and cargo transport services from Russia and our international partners if U.S. commercial services are not yet demonstrated and available.

International partnerships are also key to our Earth and space science efforts. Over half of NASA's 55 science missions currently in space have some form of international collaboration, and we hope to work together even more closely on future science and exploration missions.

The Science Mission Directorate has an exciting budget request that initiates seven new missions—put in perspective, this is more than in the previous three SMD budgets combined. The FY 2009 budget also increases funding for research and analysis (or

R&A) in order to better NASA's return on investment in our science missions.

In Earth science, NASA's investments in measuring the forces and effects of climate change are allowing the policymakers and the public to better understand its implications to our home planet. Based on NASA satellite data, we have seen the receding ice sheets of Greenland and Antarctica; we have observed the smallest Arctic sea ice coverage ever recorded; and using satellite altimetry, we have recorded rising global sea levels. NASA sensors also helped document the doubling of nitrogen oxide emissions, one of the greenhouse gases that form smog, over Asia from 2000 to 2006. Last year, NASA finally received the much-anticipated, first-ever decadal survey for Earth science, so we now know the mission priorities of the science community. Based on these results, NASA's FY 2009 five-year budget runout provides \$910 million for the development for two decadal survey priorities, the SMAP mission for soil moisture mapping and a second generation ICESat mission, as well as formulation and early development work on three additional decadal survey missions. Also included in this budget is increased funding for seven other Earth Science missions currently under development in order to keep them on schedule. In conjunction with NOAA's efforts to extend measurements of key climate change variables, we are stepping out smartly to implement and launch our Earth science missions. This research and the application of our increased understanding of the Earth system will benefit everyone.

The FY 2009 budget also increases funding for lunar science in order to better understand our moon. NASA's science and exploration mission directorates are working together to develop two small lunar landers, and SMD is initiating a series of new and exciting missions heading to the moon over the next decade, like the LADEE small orbiter to characterize the atmosphere and lunar dust environment. This year, we are especially looking forward to the launch of India's Chandrayaan-1 spacecraft, which includes

two NASA payloads, as well as the launch of NASA's Lunar Reconnaissance Orbiter and LCROSS secondary payload.

For Mars, we are focusing much of our efforts after 2013 to carry out a sample return mission to launch by 2020. In planetary science, the FY 2009 budget also initiates development of a flagship outer planets mission, which we hope will include significant international collaboration. In astrophysics, we are initiating the Joint Dark Energy Mission, the highest priority among astrophysicists, and in heliophysics we are initiating Solar Probe Plus, a high priority heliophysics mission, starting in FY 2009.

In order to maintain a healthy mix of large and small missions consistent with NRC recommendations, SMD is further applying funds to revitalize small explorers, missions of opportunity, and NASA's suborbital flight program.

In late 2006, NASA consolidated its deep space, near-Earth, and space communications networks into a centrally-managed, unified effort within the Space Operations Mission Directorate in order to better leverage the capabilities of each network. With FY 2009, we are now transferring the budget responsibility from the Science Mission Directorate to the Space Operations Mission Directorate, or Space Ops, in order to integrate both budget and management responsibilities. Space Ops will need to meet the communication and navigation requirements of all their customers, including science.

Last December, the president approved the National Plan for Aeronautics R&D and Related Infrastructure, as a follow-on to the policy approved one year earlier. This comprehensive plan provides high-priority research challenges, goals, and objectives for all federal agencies, including NASA. We are addressing the fundamental research needs facing the Next Generation Air Transportation System while developing world-class aeronautics expertise and capabilities, and we are closely coordinating the use of our research and test facilities with other federal agencies. NASA is also pursuing innovative partnerships with commercial

companies that will better leverage such private investment work toward the president's strategic goals.

In conclusion, I want to thank the mission directorate associate administrators, center directors, and the headquarters staff who worked tirelessly in putting together NASA's FY 2009 budget request, with special recognition to David Schurr and Cynthia Lodge. With the congressional direction in the FY 2008 appropriations on account structure, the staff needed to work weekends and many late hours over the past month to make sure the budget numbers and program plans in our congressional justification that you should find on-line were accurate. We will need such dedication and attention-to-detail from everyone to tackle the challenges facing us.

It is appropriate that at this time in which we are poised to realize the visions of a new era that we look back and reflect on the many achievements drawn from the previous challenge of Apollo. For it is these challenges that push us to new heights, to new worlds, and indeed fulfill our vast potential as a nation and as a people. This is not done in an instant. One budget cannot see it through. We must remain faithful to our dream and sustain our efforts – meeting our commitments and achieving accomplishments over time. This is our vow and it must be our nation's conviction if we are to see this challenge through to fruition.

Thank you.