

### Message from the Administrator

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I am proud to submit the President's Fiscal Year 2011 Budget Request of \$19.0 billion for NASA. At NASA, we are incredibly excited that the President's budget provides \$6B in new funding over the next 5 years, and a significant increase in FY2011. This investment is a testament to our innovative workforce, our forward looking programs, and our ability to connect our work with societal needs to drive prosperity for people across the Nation. With President Obama's new direction to NASA, we will be investing in the best peer-reviewed research, innovative new technologies, dramatic flight demonstrations, and the nation's space industry. All of these investments are designed to continue NASA's world leadership in space exploration with humans and robots, push the frontiers of knowledge and capability, and focus NASA on key national needs, while driving innovation and facilitating the creation of new jobs for the future.

Before embarking on the discussion of the future Programs contained in the President's Budget Request, I would like to take this opportunity to reflect on the end of the Space Shuttle Program, which is scheduled to complete its final flight this year. Speaking from four personal experiences as a Shuttle crew member, I can say that this Nation owes deep thanks to the tens of thousands of men and women who made this program a reality. The Shuttle (originally Space Transportation System) has served our Nation well, teaching us what humans can achieve on orbit, launching and servicing iconic satellites like the Hubble Space Telescope, allowing school children to fly experiments in space and teachers to travel there, and enabling us to construct the spectacular orbiting laboratory that is the International Space Station (ISS). The Shuttle has also borne painful lessons about safety and reminded us of the human risks we take when we choose to be a space-faring Nation. As we move ahead to the next era of space exploration, we will be standing on the shoulders of those early Shuttle designers, engineers, and technicians who gave us this marvelous technological achievement. The Space Shuttle will be forever recognized as a symbol of American innovation, ingenuity, and courage and a gateway to international collaboration in space.

The FY 2011 budget provides the resources required to complete the remaining Space Shuttle manifest, even if it slips into the first quarter of FY 2011. The budget request places the International Space Station on an exciting path, extending it to at least 2020, upgrading its capabilities, and allowing us to utilize it as the national lab it was envisioned to be. We will make full use of its incredible potential, enhancing the utilization of research and development capabilities on-board. We will fly payloads for Earth Science, significantly expand our Human Research Program, and use the ISS as a technology test bed to pave the way for future human exploration beyond low Earth orbit.

NASA is a world leader in climate change research and this budget dramatically expands NASA's climate research and observations capability. We will accelerate several of our most relevant climate change missions, consistent with the recommendations of the National Academy of Sciences. We will initiate a re-flight of the Orbiting Carbon Observatory, to be launched in 2013, and invest in additional carbon monitoring capabilities. With this knowledge, NASA and others will be able to better assess the current and future global impacts of climate change.

Our Space Science programs will continue to operate dozens of missions across the solar system, and support the development of missions to understand the Sun, Moon, Mars and the broader Universe. The budget request also seeks to expand research and development efforts in NASA's Aeronautics Program, emphasizing the Next Generation Air Transportation System (NextGen) and new environmentally responsible aviation research initiatives. These investments will enable safer and cleaner air travel in the future.

A major new program in the budget seeks to rebuild NASA's capability to be an engine of innovation for the nation. The new Space Technology program will develop innovative technologies to support not just NASA, but other government agencies and industry. An enhanced technology transfer effort within this program will work to ensure that NASA inventions are made available to the broadest range of U.S. companies, including small businesses, in addition to the space industry.

## NASA FY 2010 Budget Request Summary

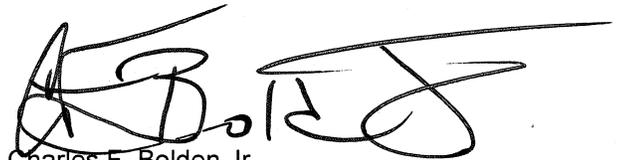
The budget request cancels the Constellation Program, which the independent Augustine Committee concluded would be unable to achieve its goals. Although Constellation is ending, we gratefully acknowledge the hard work and dedication of the NASA and contractor workforce that made significant contributions through this Program. Their commitment has brought great value to the agency, and the knowledge gained will have a pivotal role to play in our future path.

This budget replaces Constellation with a bold new 21<sup>st</sup> century space exploration program that builds the enabling capabilities that will allow us to explore not just the Moon, but multiple destinations throughout the solar system. The budget supports exciting transformative technology programs to invent and demonstrate the myriad of new space exploration capabilities that are required to sustainably send humans into the solar system. We will seek new ideas from many sources, seed innovation across the country, and create a space exploration program that is sustainable and will inspire the nation. We will invest in game-changing technologies such as advanced engines for launch and in-space travel; super light-weight space materials; new types of space habitats; new entry, descent, and landing systems; space resource processing; and radiation protection for people and space systems. We will seed activities ranging from fundamental space technology research to flagship technology demonstrations in space and on other planets. These activities will draw new innovators to NASA, revitalizing our capabilities for the decades to come. It is with these capabilities that humans will venture out into the solar system and, eventually, beyond.

And as we invest in the most cutting-edge research and technology to enable human exploration beyond Earth, we will also work to cultivate a vigorous space exploration industry through a commercial crew program that seeks to spur competition and innovation in American industry, ultimately resulting in commercial human spaceflight services. This budget funds NASA to contract with industry to provide astronaut transportation to the International Space Station as soon as possible consistent with safety, reducing the risk of relying solely on foreign crew transports for years to come. This will act as a catalyst for the development of other new businesses capitalizing on affordable access to space, help create thousands of new jobs, and help reduce the cost of access to space.

All of these accomplishments will be buoyed by a robust STEM education program to support the President's *Educate to Innovate Initiative* promoting teacher competence and student achievement in the areas of STEM education needed to assure NASA, and the nation, an increased supply of scientists and engineers in the decades ahead when world technological leadership will become increasingly competitive.

There is no doubt that this budget seeks bold, and sometimes difficult, changes at NASA but I am confident it will lead to a stronger and more vibrant agency in the future. I stand ready to work with Congress to as we build a compelling, sustainable future in space.



Charles F. Bolden Jr.  
NASA Administrator