

REMARKS FOR ADMINISTRATOR BOLDEN
49th ANNUAL GODDARD MEMORIAL SYMPOSIUM OPENING
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Thank you, Rob (Strain) and thank you to the American Astronautical Society for inviting me to speak today.

It's a great time to be in the aerospace field. I know many of you here today are probably from NASA's Goddard Space Flight Center just down the road, and I want to thank you for all of your work. A lot of you support the Hubble Space Telescope, to which I'm a little partial, since I assisted in deploying it from the Shuttle Discovery as part of the STS-31 crew in 1990. I think Robert Goddard would be amazed that Hubble is just one of many, many incredible things that NASA – and the aerospace field – continues to create for the betterment and wonderment of humankind.

I also want to say that human spaceflight has a very bright future. We have two more flights of the Space Shuttle, including the last flight of Endeavour, STS-134, in just three weeks and the final flight of Atlantis, STS-135, in June.

Over three decades, this flagship program has become part of the fabric of our nation's history. It has helped the United States to lead the world in space exploration. It's helped us improve communications on Earth and to understand our home planet better. It's set scientific satellites like Magellan and Ulysses speeding on their missions into the solar system and launched Hubble and Chandra to explore the universe. The shuttle program has given us tremendous knowledge about a reusable spacecraft and launch system from which future commercial systems will benefit. It's enabled construction of the International Space Station, our anchor for future human exploration, which is leading to breakthroughs in human health and microgravity research. And it's provided "first ever" astronaut flight and command opportunities for women and minorities.

The shuttle's retirement is bittersweet for us, but at NASA we are also very excited about our future. The human spaceflight program will continue with astronauts living and working on the International Space Station for at least 10 more years. If we stick to the ambitious plan laid out by President Obama, multiple, made-in-America capabilities for reaching low Earth orbit will also come online during that time.

Most of you probably know the basics about President Obama's Fiscal Year 2012 budget request for NASA. The President has asked for \$18.7 billion for the upcoming year. This budget requires us to live within our means so we can invest in our future. But it maintains our strong commitment to human spaceflight and new technologies. It establishes critical priorities and invests in the excellent science, aeronautics research, and education programs that will help us win the future, and if we're going to win, we'll have to out-innovate, out-educate, and out-build all others in the world.

At its core, NASA's mission has remained fundamentally unchanged over our 50-year history and this mission supports our vision: "To reach for new heights and reveal the unknown so what we do and learn will benefit all humankind."

And now, we carry out this mission with a renewed commitment to focusing on what we do best, while empowering America's industry innovators and entrepreneurs to join us on our journey.

What we do best is focus on the next big horizon. The things that aren't possible yet, but are achievable if we work hard toward them and marshal our energies and talents as a nation -- as a global people concerned with human achievement and exploration.

Even in these difficult fiscal times, the President's budget supports all elements of the bipartisan NASA Authorization Act of 2010, that lays out a framework that clears up the uncertainty about our space program's future direction. Our budget rededicates NASA to a national focus on reinvigorated research, development, and innovation. It gives us the means to win the future. A future that I think is going to be very bright.

Because these are tough fiscal times, tough choices had to be made. Our number one priority in the near term is safely flying out the shuttle and carrying out our research and development activities on the International Space Station in a manner that maintains the safety and well being of our U.S. and international partner flight crewmembers.

We are steadfastly working to plan an integrated, comprehensive human space flight program. The heavy-lift rocket, or Space Launch System

(SLS), and multipurpose crew vehicle, or MPCV, will be crucial to exploring all of our beyond-Earth destinations. We will release plans for them this year in the late spring or early summer timeframe. Our efforts continue to focus on leveraging the assets and experience gained from the Constellation Program to ensure early successes with the SLS and MPCV.

Our commercial partners are making great progress on developing their capabilities for transportation to low Earth orbit. We're confident that commercial space is going to create an entirely new segment of the economy that will be a job-creating engine for decades to come. All these aspects work together so that we have transportation to the space station and are able to go farther into the solar system with humans.

We've seen many milestones in the last few months. In December, SpaceX made history by becoming the first commercial entity to launch, orbit and safely retrieve a capsule. Stennis Space Center continues to have successful ground tests of the AJ26 engine for Orbital Sciences Corporation's Taurus II rocket. Last Tuesday, our Wallops Flight Facility located on the Maryland Eastern Shore inaugurated its Horizontal Integration Facility, with Orbital as the first customer. It's a great step

forward in making the Mid-Atlantic Regional Spaceport a hub of commercial space activity.

But let me get back to the science. There's a whole lot of great science taking place right now. A renaissance.

NASA science missions are truly diverse. We count among them eyes on the sun and moon, wheels on Mars, probes speeding to the very edge of our solar system, and great observatories that are examining light from near the time of the Big Bang and spying on planets in other solar systems. These missions, with help from our many international, academic and corporate partners, have been re-writing our textbooks.

It was my great pleasure a couple of weeks ago to visit the mission control center at the Applied Physics Laboratory on the Johns Hopkins campus in Laurel for the MESSENGER spacecraft orbit insertion. Everyone was so excited about what was happening, and it was infectious.

It's been 7 years since MESSENGER launched on August 3, 2004, not counting the mission development phase preceding that, and these

scientists and engineers were watching years of hopes and dreams come down to little dots on a screen that represented information that was already 9 minutes old. As those dots progressed, we were pretty much all holding our breath. But eventually there came word that the spacecraft had successfully fired its thrusters and allowed itself to be captured in a stable orbit of Mercury, the first time this has ever been done. I am so proud to be head of an agency that is still doing such incredible things – things never done before such as the MESSENGER orbit of the Sun's nearest neighbor, Mercury.

Just yesterday, MESSENGER began returning images from Mercury. The first image was of a region near Mercury's south pole never before imaged by a spacecraft. They're up on our NASA.gov website, and they are amazing. But they're only the tip of what will be a very big iceberg.

Coming up later this year, we're sending a rover the size of a small car to Mars. We call it Curiosity. The Dawn mission reaches the asteroid Vesta in July and begins a one year orbital study before leaving Vesta's orbit – this feat itself is another first for a spacecraft. Dawn will then continue its journey, arriving at asteroid Ceres in 2015. We're also launching Juno, a

mission to Jupiter, this summer. Finally, GRAIL launches later this year to study the Moon's gravity.

In low Earth orbit, the International Space Station remains our anchor for all future exploration. Over the next 10 years in this amazing orbiting laboratory, we'll continue to collaborate with other nations to live and work together in space, and perform cutting edge research and technology demonstrations that are critical to our eventual exploration into deep space with humans. We've worked tremendously hard with nations across the globe to build the ISS, and now it is our toehold in space, a premier platform for microgravity research and the start of our journey outward.

At the Kennedy Space Center, the Alpha Magnetic Spectrometer (AMS) has been installed in the Space Shuttle Endeavour's payload bay and is ready to head to the ISS and teach us all about new and exotic matter and energy throughout the cosmos.

The Goddard Space Flight Center will be a significant user of ISS research capabilities. The Robotic Refueling Mission developed at Goddard is at the Kennedy Space Center being readied for launch later this year. This

technology demonstration will use the station's Special Purpose Dexterous Manipulator robot to conduct all the tasks involved in repairing and refueling a spacecraft not designed to be serviced on orbit.

We all love space. For most of us, it's our livelihood and our passion. And it's the nation's future. Both philosophically and economically, space is where many of our greatest triumphs and potential lie. I'm not talking about decades, I'm talking about the very near future, as witnessed by the amazing things happening right now, today, because of our investment in an exploration program that continues to innovate and push the limits of human experience and understanding.

It's amazing how our field is unfolding, and I thank each of you for your dedication to it and for your contributions to our future.

Now, it's my pleasure to introduce my good friend, Dr. John Holdren. Currently, John holds many titles. He is Assistant to the President for Science and Technology, Director of the White House Office of Science and Technology Policy, and Co-Chair of the President's Council of Advisors on Science and Technology.

John is helping to guide President Obama's vision for a nation where science, technology and innovation reach their full potential for inspiration and economic benefit. Beyond that, he loves this field. As head of OSTP, he's been a close partner with NASA as we chart a dynamic future for human and robotic exploration. He has a long and distinguished career, serving with universities and philanthropic organizations and shaping our nation's technology and energy policies.

Our careers have taken very different paths, but we have both arrived at this moment, where we stand together at a turning point and face historic opportunities for advancing this nation's capabilities. We couldn't ask for a more thoughtful and talented counselor. Please welcome, Dr. John Holdren.