REMARKS FOR ADMINISTRATOR BOLDEN
Maryland Space Business Roundtable
March 29, 2011

It's my pleasure to be here today. It's been a busy couple of weeks because there is a lot happening as we work to safely fly out the shuttle, ramp up our next generation of space transportation and exploration activities and continue our important science missions.

I was down at the Marshall Space Flight Center last Thursday, where they'd just completed a launch vehicle shell buckling test. We "put the squeeze" on materials to see how much pressure they can withstand. In this case, a test cylinder was subjected to about a million pounds of force until it failed. Such tests will give us and our industry partners important data as we develop a heavy lift launch vehicle and they could help us make lighter weight vehicles that are cheaper to develop. The results from these tests will also benefit our commercial cargo and crew providers in the design and construction of their launch vehicles. NASA's Langley Research Center and the NASA Engineering and Safety Center were also involved.

I was also there to present the Administrator's Cup to the Marshall team for their Agency-leading support to small businesses. It's a national goal to increase the representation of small businesses in federal procurement and among the subcontractors of our primes and I know all of you endorse that effort.

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, let alone 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.

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 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. I know Lockheed and others of you are involved with that. GRAIL heads for the Moon later this year to study the Moon's gravity. I could go on. It's really an exciting time for all of us.

This week we said goodbye to the Stardust NExT mission. For its original mission, the spacecraft returned samples of interstellar dust and particles from comet Wild 2. It then went a few million more miles to revisit comet Tempel 1 to see what it looked like more than five years after Deep Impact hit it with a large 370 kilogram impactor. Stardust NExT is now out of fuel and will travel off into the solar system after giving us much more than we originally anticipated. Over 11 years, it traveled three and a half BILLION miles.

The Alpha Magnetic Spectrometer has been installed in the Space Shuttle Endeavour's payload bay and is ready to head to the International Space Station in a few weeks and teach us all about new and exotic matter and energy throughout the cosmos.

That will be the last flight for Endeavour, and while that's bittersweet, it's also a tribute to the thousands of men and women who have helped the shuttle make great contributions to our nation.

We are excited about what the future holds. Our 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.

In low Earth orbit, the space station remains our anchor for all future exploration. In this amazing orbiting laboratory, we 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.

To sustain the crucial role of the International Space Station in our long-term exploration plan, we must have safe, reliable and affordable access to it for our astronauts and their supporting equipment.

That's why the President's FY2012 budget proposal boosts funding of our partnership with the commercial space industry, and prioritizes our efforts to ensure that American astronauts and the cargo they need are transported by American companies, rather than continuing to outsource this work to foreign governments.

This new approach to getting our crews and cargo into orbit will create good jobs and expand opportunities for the American economy. If we are to win the future and out-build our competitors, it is essential that we make this program a success.

Last Tuesday, our Wallops Flight Facility located on the Maryland Eastern Shore inaugurated its Horizontal Integration Facility, with Orbital Sciences

Corporation as the first customer. It's a great step forward in making the Mid-Atlantic Regional Spaceport a hub of commercial space activity. Senator Mikulski joined me for that event because she, along with the entire Maryland Congressional Delegation, is a big supporter of NASA and all the benefits that our work brings to Maryland.

NASA is also pursuing the heavy-lift rocket and multipurpose crew vehicle that 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.

We are also continuing to invest in new aeronautics technologies and concepts for the aircraft of tomorrow, improving the safety, efficiency and environmental friendliness of air travel. The resulting improvements and economic impacts will benefit the flying public as well as the aeronautics community as a whole.

I always like to say, NASA does the big things. It's what we're built to do. It's what we love. And we have a pretty good track record. Even when we fail, we learn a tremendous amount in the process. 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."

What role will Maryland's space business have in this future? I believe a big one.

You all know that the Fiscal Year 2012 budget is working its way through the legislative process as the Fiscal Year 2011 appropriation does the same. It's an unusual situation. Fortunately, a lot of uncertainty was removed by the NASA Authorization Act of 2010 that President Obama signed last fall. That bill prioritizes our development of the heavy lift rocket and a multipurpose crew vehicle, and authorizes our continued work to facilitate commercial access to low Earth orbit. It moves us forward toward the technology development that will be required for future deep space missions while providing for excellent science, aeronautics and education programs. At $18.7 billion, it is roughly even with the 2010 spending level,

which is a good thing in the tough financial climate in which we find ourselves.

We had to make some tough choices, and right now, we're in a situation where we have to look at phasing our work and potentially de-scoping some future missions to a certain degree. We have to live within our means to make the investments in the future we want, but it doesn't mean we aren't going to do amazing, inspiring things and develop capabilities to reach more destinations in the solar system as we launch more missions that will continue to expand our knowledge of the universe.

The James Webb Space Telescope (JWST) will play a big part in Maryland's space future. As with Hubble, the Space Telescope Science Institute in Baltimore will be a key part of the mission's management. This flagship mission has had its problems, no doubt about it. But we're overcoming these challenges, developing a new management structure and keeping JWST on track. Hubble's path to launch -- and post-launch -- was not without difficulties either as many of you will remember well, and I think Webb will be equally as magnificent and significant once it is out there

at its Lagrange point a million miles away. Like Hubble, I’m confident it will rewrite our textbooks about the universe.

Maryland's very own Goddard Space Flight Center here in Greenbelt will be very busy in the years ahead, not only with JWST, but also missions in astrophysics, heliophysics, Earth science and planetary science. These missions will take advantage of the center's wealth of scientific and mission management experience.

Earth science missions like ICESat2 will help us retain continuity in the ongoing work to expand our understanding of climate change. Right now, operation Ice Bridge, which is managed by Goddard, is in Greenland gathering important data from airplanes that will help us bridge the time between the previous IceSat mission and launch of the new one. It's how NASA is keeping its commitment to provide this crucial data.

Goddard is also building on its expertise in development of tools for astronauts, much as they did for the Hubble servicing mission, and translating that into tools for robotics that we can test on the space station with potential future use in satellite servicing.

We were deeply saddened by the recent loss of the Glory mission. My heart goes out, on a very personal level, to the scientists and engineers who expended so much of their intellectual capital and passion on Glory over the course of its development. The good news is that eventually, those people will be actively working on the innovations for the next mission. That's the thing about innovation. It keeps going.

Goddard will also be key to a NASA/NOAA partnership to procure several of the nation’s polar orbiting weather satellites. The Joint Polar Satellite Systems (JPSS) program is going to be very important to civil and military weather forecasting, storm tracking and climate-monitoring.

Let me assure all of you that the future is bright for space exploration and for space business in Maryland. We have a broad and exciting portfolio, and I know you'll be with us as partners and colleagues to help make it a reality.

I don't want to take up all the time because I want to hear your questions, which I'm happy to take now.