

Remarks for AIAA/WIA Luncheon with NASA Administrator Bolden

December 9, 2009

Many thanks Lori for that introduction. Since we took office last July, Lori has been a key member of our team, and plays a crucial role in the leadership of our agency. I am lucky to have her with me as we address the challenges that await us. Lori's presence and that of many other incredibly talented women in our NASA and contractor workforce is a tribute to the dedicated work of the Women in Aerospace. As I learned in researching for this luncheon – if my information is correct – several of your founders, while attending an Arianespace Party for an early Kourou launch, observed that it “looked like an old boys club”. This led to the formative get together for this organization back in 1985 at the home of Mary Wagoner where – in her absence – Diana Hoyt was elected WIA's first president. From that initial meeting, has grown this great organization “Dedicated to expanding women's opportunities for leadership and increasing their visibility in the aerospace community.” You are to be commended for your determination and service to our industry and our nation.

Before moving on, let me recognize some of the people here today, many of whom are old friends:

- First, Dave Thompson, the current President of AIAA.
- Debra Factor Lepore, Chair of the WIA Board.
- Steve Cortese, AIAA Chair of the Corporate Member Committee.
- The organizers of today's event, Kathy Carroll of WIA and Merrie Scott of AIAA.
- And finally, the board members of AIAA and WIA.

Thank you all for hosting us today and for the critical work your organizations do in support of the aerospace community.

I'd like to spend my time today telling you a little about myself, my priorities, and about some of the major activities in which the Agency will be involved in the years ahead.

I am not sure how many of you watched the confirmation hearing for Lori and me, but it began with Chairman Rockefeller inquiring about NASA's relevance and importance. I'm also sure that a few of you by now have heard me tell the story of my initial meeting with President Obama and his one request of me as Administrator: to inspire the future generations of this country as we did in the Apollo days. He told me a story of his grandfather taking him to the port in Pearl Harbor as the carrier came in with the Apollo capsule and the astronauts aboard. Sitting on his grandfather's shoulder, he would wave to the carrier certain that the astronauts could see him and were waving back.

These two conversations – the somewhat negative impression of NASA expressed from the Chairman and the positive expectations for NASA from our President – has done much to help shape my vision for NASA. As we all know, NASA is vitally important to our country's standing as a leader in the areas of technology and science. I personally believe that NASA can be a powerful driver of our nation's economy through innovation and technology, through the programs and projects we manage, and also through helping to develop a strong pipeline of STEM talent in our younger generations.

NASA inspires the next generation through its incredible missions, but the Agency must provide more than inspiration – we must identify ways to expose our youth to opportunities in science and engineering because unless they know about the fascinating things we do, they can't be inspired to be like us. We, in cooperation with organizations like WIA and AIAA, need to provide the educational and experiential stepping-stones to inspire the next generation of scientists, engineers, and leaders in STEM fields. We must reach out directly to those who teach our kids and get them more engaged in the STEM curriculum, particularly those who are not comfortable teaching math and science. We also need to be “real-world” in our thinking about what really works for kids. We should focus not just on theoretical models of learning, but on the most effective tools and content to develop both the interest and skills in STEM at all stages of learning.

Since arriving in DC, I've been privileged to spend time talking to school kids in Washington DC, Huntsville, Alabama, and in Biloxi Mississippi. I have seen in Lincoln Elementary in Huntsville and Gorenflo Elementary in Biloxi how NASA volunteers, dedicated teachers and

supportive parents can push Title I students – those from poverty stricken communities – to lead their states in performance and scoring on academic achievement tests. I never cease to be amazed at the level of excitement and creativity shown by the kids whether they're working on building robots, watching a liquid nitrogen demonstration, or chatting with astronauts aboard the International Space Station. I've also been able to spend time talking to the educators and administrators and those discussions convince me more and more every day that NASA has not only a talented and experienced workforce, but more importantly, the necessary content to help our teachers and students succeed.

NASA is fortunate to have an outstanding White House Fellow assigned to our agency this year, Ms. Nicole Campbell. Nicole is spearheading some new exciting endeavors designed to enhance our current education outreach activities and focus our resources in order to get the maximum benefit for each dollar we spend. One such program is what we are calling the "Summer of Innovation." We are still in the planning stages so I won't go into a lot of detail here today, but you will be hearing more about this toward the end of the year.

The second important area we must address is how we attract and develop our future workforce and leaders to ensure they are as talented and diverse as possible. For early career and mid-career employees at NASA and throughout the aerospace industry, we need to provide a path to obtain the experience and skill sets needed to ensure our national leadership in science and technology.

Currently, we have the most diverse leadership team in the White House in history. In the area of science, technology, and aerospace, we also have more diversity at the top levels than in the past. A few examples:

- At NASA, I am proud to have Lori Garver as my Deputy Administrator.
- Jane Lubchenko is the Administrator of NOAA.
- Linda Hudson is CEO of BAE Systems.

While this is extremely impressive, I believe we can do better.

Since coming to NASA, I realize that we need to do a lot more regarding succession planning. I have met many ambitious, talented, and enthusiastic people at the mid-career level in our agency, people who are looking for ways to advance, to broaden their experience and skill sets, and

to enter into leadership positions. I have spent some time thinking about how this can be done.

I know that Women in Aerospace and the AIAA both focus on career development for their members through activities like mentoring, career development events, experiential learning, and many other activities. We have career development activities at NASA too, but we can use your help in finding ways to broaden and enhance our efforts.

For early career employees we have an initiative to better match employee skills and interests with elements of NASA missions. Eight of the 10 centers have high quality mentoring programs underway with the remaining two scheduled to have their programs in place by the end of the month. We have a new “On Boarding” program that provides every new NASA employee with a mentor; and finally, we are developing rotation programs that identify opportunities where appropriate that best benefit the employee’s learning.

For mid-career employees, I was pleased to see that we do have a mid-career development program. I want this course, and other efforts at NASA, to focus on making sure that our high-potential mid-career talent force truly has the tools they need to succeed.

And as an Agency with multiple generations in our workforce, we need to develop ways to better learn from one another. What we’ve found is that the older and younger generations need to be encouraged to interact more and talk to each other. We often talk about how the younger generations have great ideas, new ways of doing things. And they do. But the older generations have the experience of lessons learned – many written in blood – and from these, they also have ideas about how things can work better. NASA is working on ways to match our most experienced leaders with an infusion of fresh ideas brought by our younger hires. We need to have a better-functioning multi-generational and multi-center team.

Another major area of my focus for NASA is spawning innovation and game-changing technology development. We’ve historically done OK here, but we need to do two things to make NASA even better in this area. First, we need to change our mindset and the way we work together to have our people start thinking of NASA not just as a collection of incredible missions, but as a developer of the innovative technology that helps drive our nation’s

economy. That means people working together, across mission directorates and outside the Agency – with industry and academia – with such a focus. Second, we need to be set up within NASA to develop new and innovative technologies, and have the structure and processes necessary to hand off these technologies to the private sector where they can be applied to improve the quality of life for our citizens.

Finally, our missions and programs at NASA in human space flight, in aeronautics, and in science make us important and relevant. I will admit – we need to do a better job at explaining who we are, what we do, and the importance of our missions to our stakeholders and to the public, but that’s a subject for another luncheon talk. For example, this week, scientists and policymakers from around the world are gathering in Copenhagen to discuss climate change, climate science and climate policy. NASA plays an increasingly significant role in the United States’ environmental science, applications, and monitoring activities.

NASA has pioneered global measurements of the Earth from the unique vantage point of space – indeed, it was NASA that 20 years ago initiated the concept of Earth System Science, an ambitious program to understand the Earth as an integrated system rather than as a collection of isolated processes. Today, NASA is a leading contributor to the United States Global Change Research Program – we can boast that the current acting Director is Dr. Jack Kaye, of our Science Mission Directorate. From a personal point of view, I can tell you that the first time I went to space and looked back at Earth, I was struck not only by the awesome beauty before of our planet, but by the perspective one gains when you realize we live in one ocean with one atmosphere and we’re all interdependent on each other – rich and poor, developed and undeveloped nations and people.

As you’ve now heard, my vision for NASA encompasses a great deal, but all of it is doable because we have the leadership and we have the talented workforce pipeline to get there. NASA is important and relevant, and I am committed to making sure we continue this tradition into the future. (Nkosi’s story – *“Do all you can, with what you have, in the time that you have, in the place that you are.”*)