

As Prepared

REMARKS FOR ACTING ADMINISTRATOR

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VON BRAUN MEMORIAL SYMPOSIUM

“The View from Washington”

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Hello, everyone. It's a **pleasure to be back in Huntsville at the von Braun Symposium**. I think you've heard from the full spectrum of folks working on our commercial and exploration systems programs, so it's a tough job being the closer.

What I can do is give you **the view from Washington**. I've been acting administrator of NASA for most of this year, and it's been a busy one!

We've had a **lot of positive interest from the administration in our work**, and indeed the **President and First Daughter called Peggy Whitson aboard the International Space Station** this past April to congratulate her on her record for most cumulative time spent in space by an American astronaut. The **Vice President has visited the Kennedy and Johnson space centers**, and just a few weeks ago, **Marshall Space Flight Center** right here in Huntsville. He also enjoyed eclipse viewing in

Washington with astronauts and scientists on hand to provide science commentary.

This year, Congress passed and the President signed a **NASA Transition Authorization Act** that reaffirms the national consensus in support of NASA's established goals. The President's **FY18 budget request** further affirms our constancy of purpose. To date, the House has passed a FY 2018 Omnibus appropriation that funds NASA at \$19.9B, and the Senate Committee on Appropriations has reported a FY 2018 Commerce, Justice, Science appropriations bill that funds NASA at \$19.5B. And the **establishment of the National Space Council** is

emblematic of the high priority this nation places on space and space exploration.

It was my pleasure earlier this month to attend the **first meeting of the Council**, which includes government leaders from the civil and military space sectors. The group also heard from space industry leaders.

The Council has **historic roots in the earliest days of the Space Age**, and it has been established by the President to streamline and coordinate national space policy.

It's chaired by the Vice President, and it was clear from the get-go that **space is a national priority for this administration.** I think all of us laboring in the field, designing and building and launching rockets and training humans to live and work in space, sending science missions on years-long treks into the solar system – I think we always knew the benefits of our work. Not just discoveries and technological breakthroughs, but national security and economic benefits. And inspiration for the next generation.

So it's **great to see such high level interest in what we've been doing, and what we have planned.**

At the Space Council meeting, the **Vice President announced a call for renewed U.S. leadership in space** – with a recommendation to the President that NASA help lead and shape the way forward.

Specifically, **NASA has been directed to develop a plan for an innovative and sustainable program of exploration with commercial and international partners** to enable human expansion across the solar system, **returning humans to the Moon for long-term exploration and utilization, followed by human missions to Mars** and other destinations.

The recommendation to the President would **modify the existing National Space Policy to provide focus and direction to some of NASA's current activities and plans**, and **remove a previous guideline that NASA should undertake a human mission to an asteroid** as the next human spaceflight milestone beyond low-Earth orbit. I was involved in that work pretty heavily, but I think a lot of our tech work already underway for it is still going to be applicable to future deep space missions.

And no, I **can't answer your questions right now about what a human mission to the surface of the Moon might look like, or when**. As you probably know, EM-2 is already scheduled to take

humans to lunar orbit, and we had planned a steady cadence of missions after that to build on each other, so the Moon is on our path now, and Mars is still our horizon goal, and possibly other destinations as well. We're nothing if not aspirational. And while our goals may be in the stars, we're pretty practical in our strategy and planning.

The National Space Council acknowledged the **strategic importance of cis-lunar space as a proving ground** for missions to Mars and beyond and to advance our stepping stone approach to going farther into the solar system.

Based on conversations I've had with the Council, **we have highlighted a number of initiatives underway in this important area**, including a study of an orbital gateway or outpost that could support a sustained cadence of robotic and human missions, as well as ensuing human missions to the lunar and Mars surfaces, and other destinations.

The direction builds on the hard work we have already been doing on the Space Launch System rocket and Orion spacecraft, our efforts to enable our commercial partners and work with our international partners in low-Earth orbit at the

International Space Station, and what we have been learning from our current robotic presence at the Moon and Mars.

It adds further definition to the exploration plan we have been implementing, and strengthens and provides a context for studies and planning efforts underway across our human spaceflight, science, and technology directorates. Among new areas, we will work with industry and the international community on robotic lunar landers that explore the nature of the Moon and its resources, such as water.

As I said, **we have already been planning human missions to cis-lunar space beginning with Exploration Mission-2**, and with the upcoming budget process for FY19, we will look to solidify this work with our new goals in place.

So, the upshot is that, working in close coordination across government through the new National Space Council, and with our commercial and international partners, we are going to chart **a new future in space with opportunities for all.**

You guys, of course, know a lot about all of this, because you are either involved in it, or have heard from the people who are during this symposium.

It's timely that the **symposium's theme this year is Gateways**

in Space: Exploration, Security, and Commerce, since the

Council has a strong presence from the Defense side of the

space house, and also invites the participation of industry leaders

who have become so essential to achieving our goals.

And our **concept of a gateway is starting to get a lot of notice.**

As I'm sure you know, we're proposing to build a crew tended

spaceport in lunar orbit within the first few SLS missions that would serve as a gateway to deep space and the lunar surface.

The deep space gateway concept initially includes a power and propulsion element, a small habitat to extend crew time, a logistics module to enable research, and an airlock to enable spacewalks.

Our thinking is that the gateway would be just that – **a way to strengthen the foundation from which we make the next giant leaps.** It will be a place for astronauts to build and begin testing the systems needed for challenging missions to deep space destinations, including Mars. It could support a wide variety of

missions, either to the lunar surface or farther into the solar system, and it could also enable partners' missions.

So we're socializing that, as we say. **We are working with our stakeholders** early in the process.

You know, I'm glad we have this event at the University of Alabama, because that's the socialization we really need for all these big ideas. The **students who presented their posters at the symposium and participated in this event are going to be the ones who carry out some of these big ideas.**

Realistically, I'm not likely to be working at NASA when we have boots to Mars. I could be for the next lunar landing, but this whole notion of civilization-level game changers, it means **we're going to plant the seeds, but it's the next generation that's going to have to tend to their growth.**

I hope **they're going to continue infusing our commercial partners with innovation** to continue to charge forward and grow the commercial sector in low-Earth orbit, and then follow up with new ideas to help NASA and its partners make the most of cis-lunar space and then take us beyond.

And the **first boots on Mars are in a classroom somewhere right now**, or are very early in their career.

Those people are out there, and that's exciting to think about. I mean, already, **if you're getting ready to graduate high school in the coming year, you haven't known a time when humans have not been in space permanently.** Because we're just about right up on the anniversary of human habitation of the station, and it's 17 years this year.

So in the not too distant **future, there will be kids who have never known a time when we were not permanently stationed at the Moon.**

And **when we reach Mars with humans, as I said, it's going to be a civilization-level game changer.** Think about it. About how the world changed when we landed on the Moon. And how unified we were in those chaotic times of the 1960s, if even for a short period. The headlines around the world read "We did it." "We," meaning humanity, not just the U.S.

So that's really the gateway, that inspiration and global engagement and hope for the next generation.

The way forward for humanity in space offers so much opportunity. The ISS demonstrates every day what we can do

together – nations with differing views of the world working

peacefully together, and all our citizens looking up at them,

students around the world sharing in their experiences and getting

inspired to follow in their footsteps.

We know about spinoffs and all the technological benefits, but we

can't explore just for that. John Glenn himself was adamant about

that. **We do this because it's important for us as a species.**

And as we know there are a ton of other benefits of exploration in the technological, economic, and security arenas.

So I'd have to say, like my predecessor Charlie Bolden always did, that **I'm an optimist.** There are challenges ahead, certainly, but the big ideas are taking shape. They're not just ideas anymore, they're becoming reality. I mean, just a few years ago, it didn't look like the best bet in the world that commercial space would survive and indeed thrive as it has.

The **station itself survived a tumultuous birth** and now after going through complex political processes **will operate through at least 2024.**

Around the world, people are looking to us for leadership, and among our own people, **more than 18,000 applied to fly into space, the highest number ever. And we chose 12.**

I can't forget science, either, because there again **we united the world in a nerve wracking, but successful, landing on Mars with Curiosity.** We blew them all away with the first pictures of

Pluto. And the **James Webb Space Telescope** is going to rewrite textbooks that Hubble had previously updated.

And that's just a **small fraction of what we're going to achieve in less than a generation** from now.

So I'm very **excited about our work. I'm delighted by the enthusiasm and the talents of the young people I've met around the world** who want to join this journey of discovery. And I'm inspired by all of you. Your hard work and commitment, your passion about your piece of the big tapestry that is our exploration program, is what's making it work.

We have **support in the highest offices in the land** and across the political spectrum. And most of all we have the **trust and confidence in each other** that has always made the impossible possible.

Thank you!