

**REMARKS FOR ACTING ADMINISTRATOR**  
*As Prepared*  
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**ISS RESEARCH & DEVELOPMENT CONFERENCE**  
**July 19, 2017**

It's great to be here discussing Innovation Beyond Boundaries with you and to talk about our modern marvel, the International Space Station.

This conference gives all of us the chance for an in-depth conversation about the station as a catalyst for discovery. Thanks to CASIS and the AAS for holding it.

I know you heard from Kate Rubins yesterday, and her groundbreaking work on orbit is a wonderful example of the unprecedented things we can achieve with our unique orbiting laboratory. I know that wasn't an outcome I necessarily had in mind when we put those final pieces of the station together with the space shuttle, but it shows how out of the box and cutting edge we can be with this resource.

What we have with the station is unprecedented in human history – a place where scientists and engineers in all disciplines and from all sectors of our economy, students and educators, can get their stuff to space. It's a place where we can study, unfettered by

gravity, new avenues in medicine, materials, and technology. It's a place where human beings have lived continuously in space for more than 16 years.

And we can bring all of its benefits back down to Earth even as we use the ISS as a stepping stone to the rest of the solar system.

So here at this event, it's our effort to bring people together from around the world to work toward that common goal, using this extraordinary platform to make the discoveries that will help us explore beyond low-Earth orbit and make the world a better place.

The ISS is vital to meeting NASA's mission objective to extend human presence into the solar system. It provides unique systems for studying our astronauts in space and back on the ground after prolonged exposure to microgravity, and this data advances increasingly complex human operations in space farther from Earth than we've ever gone.

To prepare for those human expeditions into deep space, first we need to take advantage of everything the ISS has to offer us. The one-year mission concluded last year and all the data we

gathered on the Kelly brothers was another great example of something you simply need space to accomplish.

And, as NASA learns more about the changes to the human body from spaceflight and develops countermeasures to support long-duration missions, that same research is providing unique insight into problems facing our aging terrestrial population.

As I'm sure you know, in order to realize the full potential of the station's capabilities, the platform is serviced by a fleet of operational vehicles, including two U.S. cargo resupply vehicles: SpaceX's Dragon and Orbital ATK's Cygnus. In the next round of

commercial resupply we'll have Sierra Nevada Corporation and the Dreamchaser. Kind of like Uber and Lyft, plus one.

So, while CASIS is amplifying the range of work being done on the station, NASA is working hard with our commercial partners to ensure even greater access and more opportunities.

Commercial crew is just around the corner, and Boeing and SpaceX are making progress on many fronts to make that a reality. This will enable us to add another crew member to the station and allow us to do that much more science and technology demonstration.

And if any of you have been following us at all, you know that we just named a new class of astronauts – 12 out of a pool of 18,300 applicants. So there's huge interest in flying to space. And those new astronauts are going to have a lot of opportunities to fly our new commercial systems, SLS and Orion, and to do research on the station.

NASA is really the “what's next” agency, and this conference is all about what's next. Not only about what we have planned, but what you can plan and dream and start thinking about in real

terms as far as your work and the possibilities afforded by the  
ISS.

We hadn't really expected the ISS to become the amazing platform that it has for Earth observation, for instance. It's a "global observation and diagnosis station" that promotes international Earth observations aimed at understanding and resolving the environmental issues of our home planet, and it offers a unique vantage point for observing the Earth's ecosystems -- both with hands-on and automated equipment. I'm sure you've seen some of the astronauts' amazing images of unexpected natural events, such as volcanic eruptions and

earthquakes, and hurricanes. And the expected natural events as well, like the solar eclipse coming up in just one month.

We've been sending more instruments to the ISS with our commercial partners, as well, including SAGE III, which gives us a new way to monitor Earth's protective ozone layer and document its ongoing recovery, and the Lightning Imaging Sensor (LIS), which will observe lightning over much of the planet

The ISS also has its sights on farther fields, including the SEXTANT instrument as part of the NICER mission to observe neutron stars that went up on the last SpaceX mission.

Cubesats aboard the station are giving students the hands on opportunities to design and build spacecraft and operate them in space, and the current generation has more opportunities than ever to actually do research and tech demos on orbit.

That's just a sampling of the diverse activities that our station, as it comes into its own as a fully realized laboratory, is fulfilling right now, and can fulfill for you.

The limits are your imagination. And I truly mean that. There are lots of ways to get to space and to partner with people to really

make some things happen, and I hope that's an outcome of this conference for many of you.

As I said, the ISS is an Integral part of our work. It's part of our strategy for building our knowledge and capabilities so that we can travel to deep space destinations. But at the same time, we're establishing a permanent foothold in low-Earth orbit, and a vibrant space economy where our industry partners are innovating and creating jobs in ways that didn't seem possible even a few years ago.

In the big picture, NASA's work includes amazing science like the James Webb Space Telescope, just sealed in its test chamber in Houston for the next 100 days in preparation for launch next year.

New Horizons, heading for its next destination in the Kuiper Belt.

Cassini preparing for its final dive to the surface of Saturn in

September. Juno just last week gathering what I know will be

iconic images of Jupiter's great red spot. Curiosity still roaming

Mars even as we prepare for InSight next year and Mars 2020

two years later. Parker Solar Probe preparing to look at the sun.

All that stuff is going on right now, today, but in 10 or 20 years, it's

going to be the stuff that people built on to make the next

milestones happen. Just as last week we recognized the anniversary of Mariner 4's first successful flyby of Mars in 1965... and now we're well on our way to sending humans to the Red Planet, using everything we learn at ISS and all the technology development and progress with SLS and Orion that are leading to the next great missions with humans to deep space.

I'm glad that so many students and young people are taking part in this conference, because really all of these things are about you. We want to inspire you to take our places and create your own space program and build the global bridges that will help us achieve civilization-level game changers for the entire planet.

That's what reaching Mars with humans is going to be. That's what finding life somewhere else in our solar system is going to be. And it's all possible for you guys.

Our landing on the moon, our great observatories looking into other galaxies, our planetary missions exploring new worlds... they all reflect our common desire to know what else this solar system holds. I don't think any among us is untouched by the images we receive from other worlds. And if you're old enough to remember when the first Viking images came back from Mars – that was a mind blower. Truly spectacular and unprecedented,

and it made us want to do more. The image of human beings on Mars, just as with the Apollo astronauts on the moon, is even more compelling.

We still have a lot of work to do before we hand all of this off to you, but I think all of the exciting things I've mentioned, which really barely scratch the surface of what's going on, are going to leave you a whole lot of options for doing amazing things in the future.

So today, we're looking at horizon goals, and we're also looking at where we are today – what's realistic and what we aspire to.

Because aspirations become tomorrow's realities. And the reality of what we can do on the station right now is pretty amazing.

I applaud all of you for the dialogue and exchange taking place here today, and I hope everyone enjoys the rest of the conference. Thank you.