

REMARKS FOR ADMINISTRATOR BOLDEN
INTERNATIONAL SPACE EXPLORATION FORUM
Jan. 9, 2014

- I want to join my other U.S. government colleagues in welcoming all of you to this extraordinary gathering of international space leaders.
- I am pleased that we have been able to come together today as a global community, to further our commitment to the peaceful exploration of outer space, the advancement of scientific discovery and protection of the most important planet in our solar system – planet Earth.
- Dr. John Holdren, President Obama's science advisor and head of the Office of Science and Technology Policy, announced the Obama Administration is committing the United States to extension of the space station to at least the year 2024. Although we understand that our ISS Partners' governments may not yet be ready to make a decision with respect to ISS extension to at least 2024, we hope that each of the ISS Partners will come to a similar decision through its own government process.
- Extending the life of the ISS will allow NASA, industry, academia and the international space community to continue the use of this unprecedented facility for a broad range of activities that meet each of our respective national goals and interests. From a NASA perspective the ISS is absolutely essential to the goals of sending humans to Mars in the 2030s, developing and establishing a robust U.S. crew transportation capability to low Earth orbit, achieving a self-sustaining commercial use of space in LEO, and returning benefits to humanity through research and technology development.
- I'm very excited about the prospect of having this extraordinary resource available to all of our nations for at least another decade and potentially beyond.
- As many of you know firsthand, the ISS has already proven to be an amazing tool for scientific advancement and international cooperation. In Earth Science, for example, the station has demonstrated its value as a remote sensing platform. The Hyperspectral Imager for the Coastal Ocean aboard the station can help researchers better understand coastal water quality. The U.S. Environmental Protection Agency used the instrument to develop a proof-of-concept to help monitor and protect water supplies.
- With the launch of two Earth science instruments to the International Space Station this year, and more in the coming years, NASA will for the first time use the orbiting laboratory as a 24/7 Earth-observing platform to collect critical information about ocean winds, clouds, and aerosol particles for climate research, weather forecasting, and hurricane monitoring.
- Astronauts also have taken some of the most amazing pictures from the station, from hurricanes to wildfires, giving us a bird's eye view that inspires and helps millions around the globe see our planet in a different light. Doubtless, these images and applications encourage even more nations to join us in space exploration.
- The ISS is a model for collaborative space exploration. Over 80 nations have utilized the ISS to date and the ISS will continue to serve as a foundation, in low-

Earth orbit and beyond, for new exploration endeavors for years to come.

- For the U.S. space program, this is a time of great change and promise. We are preparing to expand human exploration further into space. And much as we transitioned from the Apollo era to Shuttle, we are witnessing a fundamental change in how we approach space exploration, with private sector partnerships and international collaborations key to our success.
- This past year, we were hard at work carrying out the ambitious space exploration plan outlined by President Obama and agreed to by a bi-partisan majority in Congress.
- Working with our private sector partners, NASA helped U.S. commercial companies transform access to low-Earth orbit and the ISS, even as the venerable Voyager I spacecraft reached interstellar space, and engineers moved ahead on technologies that will help carry out the first astronaut mission to an asteroid and eventually Mars.
- Together, with 12 of our international partners, the International Space Exploration Coordination Group released the Global Exploration Roadmap, sending a clear signal that the global community is committed to a unified strategy of deep space exploration, with robotic and human missions to destinations that include near-Earth asteroids, the moon and Mars.
- This roadmap builds on our collective successes to date, drives innovation and new technologies, and increases collaboration and integration between human and robotic exploration to return great benefit to the global community.
- We have been making steady progress on the Space Launch System and Orion multipurpose crew vehicle, which will send astronauts farther into space than ever before, helping to enable some of the big goals of the roadmap.
- In fact, later this year, we will witness the first flight test of Orion as it simulates a lunar reentry, bringing us closer to the first launch of an integrated system with the Space Launch System in 2017. And as Dr. Holdren described, we are planning to use our combined robotic and human exploration capabilities to retrieve a near-Earth asteroid into a stable orbit around the moon, and rendezvous with it via Orion and SLS to enable astronauts to collect and return samples to the Earth. From this orbit, other deep space destinations are easily accessible, such as the L2 gravitational-equilibration point previously identified by NASA as a logical destination on the path extending the reach of humans toward Mars. This asteroid redirection mission is enabling of the first steps in the Global Exploration Roadmap.
- We also made extraordinary progress on our plan to launch astronauts from the United States. Again, this is in partnership with commercial companies, firms that are investing in technology and innovation and creating good-paying jobs.
- Of course, the International Space Station remains the springboard to our next great leap in exploration. As a convergence of science, technology and human innovation, it is helping us learn what it means to be a spacefaring people by demonstrating new technologies and making research breakthroughs not possible on Earth.
- Beyond its technical and engineering accomplishments, however, possibly one of the greatest accomplishments of the station is how it has united many nations in

the common pursuit of something that none of us could have accomplished on our own.

- And to date, across the space station partners, literally millions of students have been touched, including participation in activities by 25 thousand schools, 2.8 million teachers, and 43.1 million students around the globe.
- Exploration in general enables unique partnerships across borders. In Earth Science, for instance, we have five missions coming up this year. First will be Global Precipitation Measurement, with our friends in Japan.
- After our groundbreaking landing on Mars with Curiosity, which carries instruments from 5 nations and enjoys researcher involvement from around the globe, we are also participating in upcoming missions to the Red Planet with other partners.
- From the Apollo-Soyuz Test Project, to Curiosity and the ISS, with many other bright moments in between, we not only have a long history of exploring space with other nations, we also have a bright future ahead of us.
- I think that everyone here would agree that investments by our respective governments in space exploration are critical to our future successes. The return on those investments are real and complex, from the direct findings of Curiosity, for example, that Mars could once have supported life, to the good jobs our research and technology development creates, to the inspiration for new generations to look beyond the news of the day to the greater things we can achieve if we aspire to reaching our potential and to reaching out across borders.
- Space helps us do all that. To join together with a common purpose. To achieve the promise that some of us who have traveled to space have been fortunate to see -- that of our Earth floating peacefully beneath us, devoid of national borders, but magnificent with its vast oceans and its continents.
- NASA is committed to the ISS as a long-term platform to enable the utilization of space for global research and development. We're committed to the Global Exploration Roadmap and implementing a unified strategy of deep space exploration, with robotic and human missions to destinations that include near-Earth asteroids, the moon and Mars.
- We are committed to the continued peaceful uses of outer space and unlocking the mysteries of our vast universe.
- And most important to this audience, we are committed to exploring space in collaboration and partnership with space agencies around the world. The United States expresses its strong commitment to advance space exploration and urges all nations to join us to extend humanity's reach into the solar system. Our discussions here will also serve as an opportunity to draw attention to the broader benefits of space exploration to our nations and citizens.
- Let me say this again, international space exploration provides benefit to humankind and is worth each of our nations' investment.
- As always, it's going to be a great journey.
- Thank you.