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Statement of
The Honorable Charles F. Bolden, Jr.
Administrator
National Aeronautics and Space Administration

before the

Subcommittee on Commerce, Justice, Science and Related Agencies
Committee on Appropriations
U. S. House of Representatives

Mr. Chairman and Members of the Subcommittee, I am pleased to have this opportunity to discuss NASA's FY 2015 budget request. The requested budget of $17.46 billion provides the resources NASA needs to pursue the goals and priorities that the Congress and the Administration have established for the Agency and will ensure that NASA will remain the world's leader in space. A summary of the FY 2015 budget request is appended to this statement.

The President's FY 2015 request supports NASA's continuing quest to extend human presence into deep space and on to Mars. NASA will continue to perform research aboard the International Space Station (ISS), partner with American industry for crew and cargo delivery to low Earth orbit (LEO), develop the Space Launch System (SLS) and Orion crew vehicle, and test our new capabilities in the proving ground of cis-lunar space before sending a human mission to the Red Planet. NASA will also continue to develop a rich array of commercial and international partnerships as part of its overall exploration framework. As we speak, American astronauts aboard the ISS are learning the fundamental lessons necessary to safely execute extended missions deeper into space. Later this year we will see the Exploration Flight Test-1 (EFT-1) of Orion atop a Delta IV Heavy launch vehicle. NASA is pressing forward with development of SLS and Orion, preparing for a first, uncrewed mission in FY 2018.

As a critical element in this long-term exploration strategy, as well as a source of continuing scientific and material benefits to life on Earth, operations in LEO remain among NASA's highest priorities. With the Administration's commitment to the extension of ISS operations through 2024, NASA looks forward to expanded research opportunities with continuing support from our commercial partners for both crew and cargo. Two American companies are launching supplies to the ISS from U.S. soil. NASA will complete a commercial crew competition this summer, and if Congress fully funds our FY 2015 budget request, we believe we can stay on track to launch astronauts to the ISS from American soil by the end of 2017. This capability is critically important to safe/sustained operations, and will end our sole reliance on our Russian partners for this service. The requested funding is required to meet this critical near-term need.

Consistent with the 2010 NASA Authorization Act (P.L. 111-267) and the National Space Policy, NASA continues to make solid progress on the development of SLS and Orion for a series of test flights including a compelling mission in the proving ground of cis-lunar space to redirect a small asteroid into orbit around the Moon, and to send U.S. astronauts to rendezvous with and explore

this target. The proving ground of cis-lunar space also puts the Nation in a position from which we may help our commercial and international partners robotically explore other destinations on that pathway, such as the Moon.

The Asteroid Redirect Mission (ARM) will enable NASA to test powerful Solar Electric Propulsion (SEP) and integrated human/robotic vehicle operations in deep-space trajectories. Like the invaluable ISS, this mission will provide NASA with critical knowledge, experience and technologies for future human exploration missions deeper into space. Drawing on our long-term investments across three Mission Directorates, the FY 2015 request supports continued core capability development and formulation of the integrated mission concept. The overall asteroid initiative also includes enhanced Near Earth Object (NEO) detection and characterization, which will extend our understanding of the NEO threat while providing additional opportunities for investigations of asteroids and demonstrations of technologies and capabilities.

NASA's FY 2015 request for Science supports operation of the world's premier constellation of spacecraft dedicated to exploring Earth, the solar system, and the universe beyond, while we continue to develop the next generation of missions in pursuit of our Nation's highest priority space and Earth science. The James Webb Space Telescope (JWST), NASA's next-generation successor to the Hubble Space Telescope (HST), continues on schedule for its 2018 launch. In recent months, NASA has completed rigorous testing of the spine of the massive telescope and completed the primary mirrors for integration. As we announced last year, we have begun work on a large Curiosity-scale rover for a 2020 mission to Mars, and the FY 2015 request includes funding to continue pre-formulation activities of a potential mission to Europa, one of Jupiter's moons believed to harbor a vast subsurface ocean. NASA will launch five Earth science missions in calendar year 2014, taking advantage of the unique vantage point of space to secure new insights into our home planet. The Earth science budget will support airborne campaigns to the poles and hurricanes, development of advanced sensor technologies, and use of satellite observations and data analysis tools to improve natural hazard and climate change preparedness.

With NASA's FY 2015 request, our pioneering Aeronautics research program will continue to focus on substantially reducing aircraft fuel consumption, emissions, and noise – and help make the Next Generation Air Transportation System, or NextGen, a reality. NASA's Aeronautics Research Mission Directorate (ARMD) will continue to implement the strategic vision for aeronautics that NASA launched last year, with a focus on addressing the challenges facing the U.S. aviation community – civil and military – in the coming decades.

In essential support of the Agency's broader mission, the FY 2015 request supports an active Space Technology Program to advance cutting-edge technologies, providing an on-ramp for new space technologies, creating a pipeline that matures them from early-stage through flight, and delivering innovative solutions that dramatically improve technology capabilities for NASA, the aerospace sector, and the Nation. The request supports the sustained investments that NASA must make to mature the capabilities we need to achieve the challenging goals that the Congress has set for us. By the end of FY 2014, NASA will test and deliver two candidate designs for high-power solar electric systems for SEP with critical applications for deep-space exploration as well as for Earth-orbital activities. By the end of calendar year 2015, NASA will have completed seven Space Technology missions in 24 months, including demonstration of a deep-space atomic clock for advanced navigation, the green propellant demonstration (an alternative to highly toxic hydrazine), a solar sail to demonstrate propellant-free propulsion, and four small spacecraft missions pioneering new technologies. The Space Technology Program is also developing high performance systems for decelerating spacecraft at Mars, high bandwidth laser communications with the potential to transform communication systems for both space exploration and

commercial use, advanced life support technology, advanced robotics, and lightweight composite propellant tanks.

The program laid out in detail in NASA's FY 2015 request continues NASA's implementation of the priorities established for it in the bipartisan NASA Authorization Act of 2010. In the current constrained budget environment, we have designed a balanced program that pursues the Nation's highest priorities in science, exploration, and aeronautics; with a critical technology development program to develop essential capabilities. The FY 2015 request supports the next steps on the way to Mars in a sustainable way. It enables NASA to restore an American capability for sending humans to orbit while continuing development of a deep-space capability for human space flight. This is not an either-or scenario. Each is critically dependent on the other. The request supports the Nation's highest priority science and technology goals for space. NASA appreciates the strong budget support the Agency has received despite a difficult budget environment, and we are fully committed to delivering the world's leading space program on behalf of the American people.

NASA is pleased to be included in the President's Opportunity, Growth, and Security Initiative (OGSI). Under this initiative, NASA would receive nearly $885.5 million in additional funding in FY 2015 to focus on specific priorities. This initiative recognizes NASA as a critical source of innovation and technology that creates opportunity, economic growth, and ultimately security and prosperity. NASA's funding under OGSI would focus on priority investment opportunities such as an expanded Space Technology Program, reducing risk and enhancing competition in the Commercial Crew Program, continuing currently operating science missions and accelerating work on potential future missions. NASA's portion of OGSI would also enable further development work on SLS and Orion, more fully utilize the ISS, and support additional Earth Science mission development, advanced computational fluid dynamics research and increased investment in composite materials.

Science

With 95 missions in development and actively observing Earth, the Sun, the planets, and the universe beyond, NASA remains the world's premier space science organization and the critical source of information on the home planet. The President's FY 2015 budget request for the Science program includes $4,972.0 million, with $1,770.3 million for Earth Science, $1,280.3 million for Planetary Science, $607.3 million for Astrophysics, $645.4 million for the James Webb Telescope, and $668.9 million for Heliophysics.

Earth Science

The President's FY 2015 budget request enables NASA to continue to make critical spaceborne measurements of Earth, our home; to conduct and fund a comprehensive, competed scientific research program to turn those measurements into an understanding of our complex planet; and to use the measurements and understanding to develop and demonstrate applications that will provide direct benefit to our Nation, and indeed all of humanity. Today, there are 17 NASA-developed research satellites on orbit, making measurements of more than 60 key aspects of our planet's environment. Just a few weeks ago, in collaboration with the Japan Aerospace Exploration Agency (JAXA), the Global Precipitation Measurement mission (GPM) was launched to provide the first-ever, accurate, global maps of rain- and snowfall over the globe. During the rest of 2014, NASA will be launching four more Earth observing research missions: Orbiting Carbon Observatory-2 (OCO-2) to measure global carbon dioxide concentrations with unprecedented coverage and accuracy; RapidScat to the ISS, to make measurements of ocean wind speed and direction; Cloud-Aerosol Transport System (CATS), also to the Space Station, to measure atmospheric aerosols; and, in November, the Soil Moisture/Active Passive (SMAP)

mission to make accurate measurements of soil moisture and freeze-thaw cycling. These 2014 missions will be followed in 2015-2017 by the SAGE-III (Stratospheric Aerosol and Gas Experiment III) instrument to the ISS for atmospheric trace gas profile data, including ozone measurements; the Gravity Recovery and Climate Experiment (GRACE)-Follow On gravity mission with our German partners to measure changes in the Earth's gravity field and water storage, such as aquifer level changes; a constellation of eight smallsats, called Cyclone Global Navigation Satellite System (CYGNSS), to use reflected Global Positioning System (GPS) signals to measure conditions in cyclones and hurricanes; an instrument called Tropospheric Emissions: Monitoring of Pollution (TEMPO) to fly on a commercial geostationary communications satellite, to measure air quality over greater North America; and Ice, Cloud, and land Elevation Satellite-2 (ICESAT-2), to make precise measurements of our planet's rapidly changing ice caps and glaciers.

NASA is now developing the Pre-Aerosol, Clouds and ocean Ecosystem (PACE) ocean color and aerosol continuity mission, and the NASA-Indian Space Research Organisation (ISRO) Synthetic Aperture Radar (NI-SAR) mission in collaboration with the Indian space agency to measure solid earth processes, ice flows, global vegetation, and response to disasters and geohazards. The FY 2015 budget request also supports NASA to develop missions that will continue key climate data series, including a set of solar irradiance, ozone profile, and Earth radiation budget instruments, and follow-on capabilities in support of U.S. Geological Survey for sustained land imaging following our successful launch of Landsat-8 just one year ago.

Astrophysics and James Webb Space Telescope

NASA is making strong progress on JWST, the most powerful space telescope in history, and remains on cost and schedule for launch in 2018. The Webb telescope is the next in a series of astrophysics missions, including the venerable, yet still unrivaled, HST and the incredibly productive Kepler exoplanet mission, which are revolutionizing our understanding of the universe. After launching in 2018, the Webb telescope will travel one million miles from Earth, unfold its sunshield to the size of a tennis court, and keep its instruments cooled to a temperature of 370-387 degrees below zero Fahrenheit (40-50 Kelvin). The Webb telescope will allow us to observe objects even fainter than HST can see, which will allow us to study every phase in the history of our universe, ranging from the first luminous glow after the Big Bang, to the formation of solar systems capable of supporting life on planets like Earth, to the evolution of our own solar system. The FY 2015 request will support work to continue testing the integrated science instrument module for JWST, continue the construction of the spacecraft that will carry the science instruments and the telescope, and begin the assembly of the delivered mirror segments into the telescope backplane.

NASA's Astrophysics Program operating missions include the Hubble, Chandra, Spitzer, and Kepler telescopes; and other missions that together comprise an unrivaled, and in many ways unprecedented resource for the study of our universe. NASA is currently working with our German partner to identify a path forward for the Stratospheric Observatory for Infrared Astronomy (SOFIA), a mission with high annual operating costs that cannot be accommodated within the FY 2015 budget request. In FY 2015, NASA's next two astrophysics Explorer missions will continue their development. The Neutron Star Interior Composition Explorer (NICER) will probe the interiors of neutron stars and determine the laws of physics that govern atomic nuclei. NICER will be launched to the ISS in 2016. The Transiting Exoplanet Survey Satellite (TESS) will extend the pioneering work of the Kepler Space Telescope, which showed us that virtually every star in the sky has a planetary system. TESS launches in 2017 and will discover rocky exoplanets orbiting the nearest and brightest stars in the sky in time for the JWST to conduct follow-up observations that will characterize their atmospheres and other properties.

Planetary Science

Planetary science missions continue to explore the solar system in unrivaled scope and depth. This past November, the Lunar Atmosphere and Dust Environment Explorer (LADEE) was successfully lowered into its optimal position in lunar orbit to enable science data collection. Using its ion engines, the Dawn spacecraft is nearing its next target, Ceres, the largest asteroid in the asteroid belt, with an expected arrival in April 2015. Other upcoming outer planet encounters include the New Horizons mission flyby of Pluto in July 2015 and the Juno mission orbit insertion around Jupiter in August 2016. The FY 2015 budget request also includes funding for continuing pre-formulation activities and studies for a potential mission to Jupiter's icy moon, Europa; with compelling evidence of a liquid water ocean beneath its crust, exploration of Europa is vital to our understanding of the habitability of other planets.

Building on the success of NASA's Curiosity rover on Mars, the FY 2015 request supports plans for a robust multi-year Mars program. In a little more than a year on the Red Planet, Curiosity has landed in an ancient river bed, determined the age of the surrounding Martian rocks, found evidence the planet could have sustained microbial life, taken the first readings of radiation on the surface, and shown how natural erosion could be used to reveal the building blocks of life protected just under the surface. Curiosity is providing vital insight about Mars' past and current environments that will aid plans for future robotic and human missions. The current Mars portfolio includes the Curiosity and Opportunity rovers, the Mars Reconnaissance Orbiter, the Mars Odyssey orbiter, and our collaboration on the European Space Agency's Mars Express orbiter. It also includes the new Mars Atmosphere and Volatile EvolutioN (MAVEN) orbiter, launched in 2013 to study the Martian upper atmosphere, which will arrive at the Red Planet in mid-September 2014. Future missions include the 2016 Interior Exploration using Seismic Investigations, Geodesy and Heat Transport (InSight) mission, which will take the first look into the deep interior of Mars; participation in the European Space Agency's 2016 and 2018 ExoMars missions; and the new Mars rover planned for launch in 2020.

The FY 2015 budget request includes enhanced funding for NASA's Near Earth Object survey and characterization activities in support of the ARM effort, as well as to protect our planet. Just last year, the Wide-field Infrared Survey Explorer spacecraft was reactivated, renamed NEOWISE and given a renewed mission to assist NASA's efforts to identify the population of potentially hazardous near-Earth objects (NEOs). NEOWISE's first discovery of its renewed mission came on December 29, 2013 – a large near-Earth asteroid designated 2013 YP139, which was about 27 million miles from Earth with an estimated diameter of roughly 0.4 miles. NEOWISE can also assist in characterizing previously detected asteroids that could be considered potential targets for future exploration missions.

Heliophysics

NASA's Heliophysics Program is composed of 29 spacecraft and the associated research to understand the universal physical phenomena of magnetized plasmas and their interactions. These include the influence of the Sun in our local region of the galaxy, the origins of solar variability, and the coupling among various regions at the Earth and other planetary systems. Last year, NASA successfully launched the Interface Region Imaging Spectrograph (IRIS), a Small Explorer mission. Within a few months, IRIS provided a new understanding of how the outer solar atmosphere is heated to over a million degrees. The FY 2015 budget request will support completion of development of the Magnetospheric Multiscale (MMS) mission, which will launch in 2015 to investigate how magnetic fields connect and disconnect, often releasing tremendous amounts of energy in the process. NASA will continue to develop the Solar Probe Plus (SPP) mission for a planned launch in FY 2018, together with our instrument

contributions to the European Space Agency's Solar Orbiter mission; Solar Probe Plus will repeatedly pass through the hot outer atmosphere of the Sun, to within five times the Sun's diameter, which is much closer than any man-made object ever has flown before. Finally, the Explorer missions selected in 2013 to study Earth's outer atmosphere – Ionospheric Connection (ICON) and Global-scale Observations of the Limb and Disk (GOLD) – are in their preliminary design phases for planned launches in 2017.

Aeronautics Research

NASA's Aeronautics research is making air travel cleaner, safer, and more efficient. NASA's FY 2015 budget request provides $551.1 million to fulfill the Agency's strategic research agenda. This innovative research is aimed at transforming the aviation industry through game-changing advances in the safety, capacity, and efficiency of the air transportation system, while minimizing negative impacts on the environment. NASA's FY 2015 research portfolio is aligned with six strategic research thrusts to directly address the growing global demand for mobility, severe challenges to sustainability of energy and the environment, and technology advances in information, communications, and automation technologies. This portfolio includes those activities in our current portfolio deemed to be the most relevant and critical, as well as new activities focused on high-risk, forward thinking ideas to address aviation's big problems. The Agency will clearly define the most compelling technical challenges facing the aviation industry, and retire these challenges in a time frame that is supported by stakeholders and required by NASA's customers. Over the next two years, NASA will continue to develop, demonstrate, and transition to industry and the Federal Aviation Administration new vehicle and airspace management concepts and technologies to help realize the promise of NextGen, as well as provide technical data, analysis and recommendations to support the integration of unmanned aerial systems (UAS) into the National Air Space. We will strengthen our external partnerships through joint flight experiments using alternative aviation fuels and advanced flight deck and vehicle technologies, and through demonstrations of advanced sensors to improve safety and identify emerging faults before damage occurs. By the end of FY 2015, NASA will close out the six-year Environmentally Responsible Aviation project with a series of integrated technology demonstrations to demonstrate the feasibility of a suite of technologies to meet our aggressive environmental goals. Through the alignment of our research portfolio to address the most critical challenges facing the aviation sector, NASA will be best positioned to continue supporting the global competitiveness of the U.S. aviation industry that contributes to a $47 billion positive balance of trade, infuses $1.3 trillion annually into the U.S. economy and supports more than 10 million direct and indirect jobs[1,2]. NASA is truly with you when you fly.

Space Technology

NASA's FY 2015 request includes $705.5 million for Space Technology, to enable our future in space, drawing on talent from the NASA workforce, academia, small businesses, and the broader national space enterprise, by delivering innovative solutions that dramatically lower costs and improve technological capabilities for NASA and the Nation.

By the end of FY 2014, NASA will test and deliver two candidate designs for large deployable solar array systems, power processing units, and advanced thrusters to support a flight demonstration of SEP. In addition to being important to the future of human spaceflight and the ARM effort, high-power SEP can enable orbit transfer capability for satellites, and addresses the

[1] "Global Aerospace Industry Takes Off for the World's Largest Aerospace Trade Exhibition in 2012," July 6, 2012, International Trade Administration.

[2] "The Economic Impact of Civil Aviation on the U.S. Economy," August 2011, FAA, Page 24, Table 5 and Page 27, Table 8.

rapid power demand increases facing today's communications satellites. Having successfully demonstrated a 2.4-meter propellant tank in 2013, NASA will complete testing a 5.5-meter diameter composite tank to enable lower-mass rocket propellant tanks for future systems, including the SLS. By the end of 2015, NASA will have completed seven Space Technology missions in 24 months, including demonstration of a deep-space atomic clock for advanced navigation that has commercial application for improving GPS systems, the green propellant demonstration (a higher-performing, less toxic alternative to hydrazine), a solar sail to demonstrate propellant-free propulsion, and four small spacecraft missions pioneering new technologies. Building on recent successes with its Low Density Supersonic Decelerator, NASA plans to conduct high-speed tests – at an altitude of 170,000 feet – of the largest planetary parachute ever developed to enable precise landing of higher-mass payloads to the surface of other planets, with particular focus on infusing advanced capabilities into the Mars 2020 mission and future human exploration missions.

NASA's Space Technology investments are aligned with NASA's Human Exploration and Operations and Science Programs to reduce technological barriers and mission risk, and to foster affordable missions. The Space Technology Game Changing Development effort is delivering advanced life-support, advanced robotics, and battery technologies for system demonstrations planned by Human Exploration and Operations. For Science, Space Technology is improving navigational accuracy, developing advanced computing and avionics, and developing advanced Entry, Descent, and Landing (EDL) solutions, observatory technology, and optical communication technology to transmit large amounts of science data from deep space. Space Technology is partnering with Human Exploration and Operations and Science on many activities, including demonstration of in-situ resource utilization, optical communications, and advanced measurements on Mars. These precursor activities will pave the way and reduce risk for future Mars exploration.

Exploration and Space Operations

NASA is building the capabilities and knowledge to send humans farther from the home planet then we have ever been before. The FY 2015 budget request for Exploration is $3,976.0 million with $2,784.4 million for Exploration Systems Development, $848.3 million for Commercial Space Flight, and $343.4 million for Exploration Research and Development. Space Operations, including the ISS and Space Flight Support, form a critical component of the Agency's exploration plans by enabling us to develop the knowledge, experience, and technology necessary for safely living and working in space. The FY 2015 request for Space Operations is $3,905.4 million, with $3050.8 for ISS and $854.6 for Space Flight Support (SFS).

Exploration Systems

The FY 2015 request will enable NASA to continue to meet its milestones in the development of the Space Launch System (SLS), a rocket system ultimately capable of bringing an unprecedented 130 metric tons of payload to Earth orbit. The Orion program continues on track for an uncrewed test flight later this year. This test flight, Exploration Flight Test-1 (EFT-1), will see Orion conduct two orbits of Earth and reenter the atmosphere at approximately 85 percent of lunar re-entry speed of a returning deep-space exploration mission. The test will provide valuable data about the spacecraft's systems – most importantly its heat shield and structure. The flight test article for this mission is already in place at the Kennedy Space Center and being readied for this test. The FY 2015 budget request supports progress toward a first uncrewed test of the Orion and the SLS together, known as Exploration Mission-1 (EM-1) in FY 2018, with the first crewed mission of the two vehicles slated for FY 2021-2022. Orion, SLS, and Exploration Ground Systems (EGS) are using the latest in systems and manufacturing technology to develop the safe and sustainable systems this country needs to extend human presence to Mars. Examples include

Orion's use of time-triggered gigabit Ethernet, SLS' use of friction-stir welding on large structures to build the Core Stage, and EGS' replacement of cables from Pad 39B with the latest in fiber optics. In developing the Orion, SLS, and EGS, NASA is building a national capability for the long-term human exploration of space.

International Space Station

The FY 2015 request supports the ISS with its international crew of six orbiting Earth every 90 minutes. The Station is making deep-space exploration possible, as we build on the knowledge and experience we are gaining from the astronauts living, working, and conducting research on the ISS. On January 8, 2014, the Administration announced it is committing the United States to the extension of ISS operations through at least 2024. This will allow NASA to complete many of the research and technology development activities aboard the ISS necessary to enable planned long-duration human missions beyond LEO; extend the broader flow of societal benefits from research on the Station, which has already resulted in a discoveries that could have significant medical and industrial implications; provide NASA and its private-sector partners time to more fully transition to the commercial space industry the transportation of cargo and crew to LEO; instill confidence in the science community that the ISS platform will be available for important, long-term research endeavors; and help cement continuing U.S. leadership in human spaceflight going forward. NASA's plans for the coming year include preparing for an extended duration, year-long human-crewed mission – slated to launch in March 2015 – to explore human adaptation to space; and continuing to utilize the ISS to improve our ability to live and work in space, including conducting technology demonstrations enabling future exploration. The Center for the Advancement of Science in Space (CASIS) continues to manage the National Laboratory research being conducted in the U.S. segment of the ISS by an array of organizations, including commercial researchers interested in taking advantage of this unique, microgravity facility. One company, NanoRacks, uses standardized hardware to provide a microgravity research option for scientists working in venues ranging from grade school to academia to industry. During its first three years of business, NanoRacks sent 91 investigations to ISS, returned 10 to Earth, and deployed one CubeSat – a new area of focus using satellites that measure about four inches on all sides.

Commercial Crew and Cargo

A top priority for NASA and the Nation is to affordably and safely launch American astronauts and their supplies from U.S. soil, ending our sole reliance on foreign providers and bringing that work back home. Under NASA's Commercial Resupply Services (CRS) contracts, Space Exploration Technologies (SpaceX) was awarded 12 cargo flights to the ISS, and Orbital Sciences Corporation (Orbital) was awarded 8 flights. Counting demonstration flights and CRS resupply flights, SpaceX has now completed three cargo missions to the ISS, successfully delivering cargo and returning scientific samples to Earth, with the fourth mission expected to launch later this month. Orbital Sciences Corporation has completed their demonstration mission to the ISS and their first contract mission under CRS to deliver crew supplies, research and other cargo onboard the Cygnus spacecraft. NASA continues to work with its commercial partners to develop a U.S. commercial capability for human spaceflight and plans to launch American astronauts from U.S. soil by the end of 2017. 2014 will be a pivotal year for NASA's Commercial Crew Program (CCP) as the Agency intends to award development and certification contract by August/September for the Commercial Crew Transportation Capability (CCtCap) phase that would lead to operational crewed flights to the ISS. Competition is a key to controlling costs over the long term, and NASA's Aerospace Safety Advisory Panel has opined that competition should be maintained until safety confidence is achieved. Through the successful execution of this partnership, we will return to the United States the vital capability to launch astronauts to the ISS from U.S. soil and return them to Earth.

Education
The Administration is proposing increased interagency coordination of Science, Technology, Engineering, and Mathematics (STEM) education investments, aligned with the Five-Year Strategic Plan released last year by the Committee on STEM Education (CoSTEM). The FY 2015 budget request for Education will enhance the impact of the Federal investment in STEM Education through greater interagency coordination and cooperation in support of a cohesive national STEM strategy focused on five priority areas: K-12 instruction, undergraduate education, graduate education, and broadening participation in STEM education and careers by women and minorities traditionally underrepresented in these fields, and education activities that typically take place outside the classroom.. The Office of Education will continue its intra-agency consolidation of certain educational programs to eliminate duplication of efforts and achieve maximum leverage of resources.

The FY 2015 budget request of $88.9 million consolidates education activities in the Office of Education, including several elements that may be transferred from NASA's mission directorates under a competitive process. The FY 2015 budget request for the Education account includes funding for the National Space Grant College and Fellowship Program, the Experimental Program to Stimulate Competitive Research (EPSCoR), and the Minority University Research and Education Project (MUREP), and STEM Education and Accountability Projects. These education investments link to NASA's research, engineering, and technology missions. Each of these investments provides unique NASA experiences and resources to students and faculty. The budget also provides $15 million to the Science Mission Directorate to competitively fund the best application of NASA Science assets to meet the Nation's STEM education goals.

Conclusion
Mr. Chairman, thank you for the opportunity to appear before you today to provide you with our progress and status over the past year. I would be pleased to respond to any questions you or the other Members of the Subcommittee may have.