□ 1515

In the final analysis, we cannot get distracted, in my opinion. We need to go down both paths, making sure today we have the most efficient process possible but that tomorrow we're energy independent, because in the final analysis, that will be the only way in which we will continue to keep our economy moving, our national security intact, and our environment clean and healthy.

Mr. BLUNT. I thank my friend.

I believe for those things that look toward better solutions for the future, better conservation now, we all should be focused there. We also should be focused on using American resources, and frankly asking every question why they haven't been used. Again, I will just conclude my remarks by saying I know that these leases have been almost doubled in the last 7 years. And how long it takes to develop, some of them issued only in the last 1 or 2 years for 10 years at a time, I don't know what the planning is on that, but I am absolutely committed to the most efficient and effective use of America's resources for America's future, and I would like to see this Congress work together to get there.

DISPENSING WITH CALENDAR WEDNESDAY BUSINESS ON WEDNESDAY NEXT

Mr. HOYER. Mr. Speaker, I ask unanimous consent that the business in order under the Calendar Wednesday rule be dispensed with on Wednesday next.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Maryland?

There was no objection.

HOUR OF MEETING ON TOMORROW

Mr. HOYER. Mr. Speaker, I ask unanimous consent that when the House adjourns today, it adjourn to meet at 10 a.m. tomorrow; and further, that when the House adjourns on that day, it adjourn to meet at 12:30 p.m. on Tuesday, June 17, for morning-hour debate.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Maryland?

There was no objection.

GENERAL LEAVE

Mr. GORDON of Tennessee. Mr. Speaker, I ask unanimous consent that all Members have 5 legislative days within which to revise and extend their remarks and include extraneous material on the bill, H.R. 6063.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Tennessee?

There was no objection.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT OF 2008

The SPEAKER pro tempore. Pursuant to House Resolution 1257 and rule XVIII, the Chair declares the House in the Committee of the Whole House on the State of the Union for the consideration of the bill, H.R. 6063.

□ 1517

IN THE COMMITTEE OF THE WHOLE

Accordingly, the House resolved itself into the Committee of the Whole House on the State of the Union for the consideration of the bill (H.R. 6063) to authorize the programs of the National Aeronautics and Space Administration, and for other purposes, with Ms. BORDALLO in the chair.

The Clerk read the title of the bill.

The CHAIRMAN. Pursuant to the rule, the bill is considered read the first time.

The gentleman from Tennessee (Mr. GORDON) and the gentleman from Texas (Mr. HALL) each will control 30 minutes.

The Chair recognizes the gentleman from Tennessee.

Mr. GORDON of Tennessee. I yield myself such time as I may consume.

(Mr. GORDON of Tennessee asked and was given permission to revise and extend his remarks.)

Mr. GORDON of Tennessee. Madam Chairman, today I am asking my colleagues in the House to ensure this country's leadership in space and aeronautics program by passing H.R. 6063, the NASA Authorization Act of 2008.

First, I want to thank and commend Chairman UDALL of the Subcommittee on Space and Aeronautics on his leadership in introducing this bill and for taking a clear bipartisan approach to the development of H.R. 6063. I was pleased to be original cosponsor, but I was even more pleased that ranking minority member of our Committee on Science and Technology, Mr. HALL of Texas, and ranking minority member of our Subcommittee on Space and Aeronautics, Mr. FEENEY of Florida, were also original cosponsors.

Madam Chairman, their actions show that the importance of NASA's future in space and aeronautics is truly a bipartisan concern. And I want to thank them for their full support.

In that regard, I also would like to thank Ed Feddeman, Ken Monroe, Katy Crooks, and Lee Arnold of the minority staff for their help on this legislation. I also want to thank and acknowledge the hard work of our majority staff involved in the development of the bill, Space and Aeronautics Subcommittee staff director Dick Obermann, Allen Li, Pam Whitney, Devin Bryant, and John Piazza.

This bill passed the subcommittee and the full committee unanimously. And I think that record is in no small part due to the hard work that both sides of the aisle put into this legislation.

Madam Chairman, as we look to the transition to the new administration next year, it's important that Congress send a strong message on the best future course for our Nation's space and aeronautics program. The bipartisan consensus we have reached on H.R. 6063 signals that Congress believes a balanced NASA program of science, aeronautics, and human spaceflight, and exploration is important and worthy of the Nation's support. Yet I want to emphasize that H.R. 6063 takes a fiscally-responsible approach to providing this support.

The baseline authorization represents a 2.8 percent increase, which is inflationary at best, over the level of the authorization of fiscal year 2008. The bill also includes a special funding augmentation to accelerate the development of the crew exploration vehicle and thus minimize the human spaceflight gap that will make us dependent on the Russians to get our astronauts to and from the International Space Station until the CEV is operational.

I don't think any of us wants to or looks forward to the day when we must rely on another Nation to launch U.S. astronauts into space, but that is what we face. I want to minimize that dependency as much as possible.

However, even including that augmentation, the total funding authorization will only get us back to NASA's fiscal year 1992 funding level in terms of purchasing power.

H.R. 6063's baseline authorization also reflects the importance of NASA to the Nation's innovation agenda. NASA science and technology activities contribute much to our national competitiveness initiative, and I think we need to recognize NASA's role in that regard. NASA was included in last year's America COMPETES Act, but we didn't include an authorization then since we knew we would be reauthorizing NASA this year.

H.R. 6063 does that providing by providing a baseline authorization for NASA that includes a rate of increase over the fiscal year 2008 appropriated level that is consistent with the rate of increase proposed for agencies included under the America COMPETES Act.

Madam Chairman, this bill includes many provisions that are critical to ensuring the future strength of our Nation, including both the future health of our aviation system and our ability to better understand and respond to climate change and other challenges facing the earth's system.

It isn't always recognized that NASA counts for some three-fifths of the Nation's climate research funding. And it's a critical part of the Nation's climate research efforts. In addition, H.R. 6063 demonstrates that a properly structured human spaceflight and exploration program can provide benefits of technological, scientific, and geopolitical significance that are worthy of our Nation's investment.

This bill also includes provisions that will ensure a productive return on the Nation's investment in developing and

assembling an international space station and encourages the use of the commercial services to transport cargo and eventually crew to the station. We need to ensure that NASA has sufficient resources for all of these and other important tasks that the Nation has asked to carry out, and I believe this bill does that.

Madam Chairman, the United States has been a global leader in technology and innovation for decades. However, an esteemed committee of the National Academies raised a deep concern in its groundbreaking report, Rise Above the Gathering Storm, stating ''that the scientific and technical building blocks critical to our economic leadership are eroding at a time when many other nations are gathering strength.''

With China, India, and other global players committed to building robust aeronautics and space programs, that it is incumbent upon the United States to rise to the challenge.

This year is the fiftieth anniversary of the dawn of the space age and the fiftieth anniversary of the creation of NASA. NASA has been one of the crown jewels of the Nation's R&D enterprise over the past 50 years. I want to ensure that it remains so for the next 50, and I believe this bill will help turn that into a reality.

Madam Chairman, this bill has been endorsed by a host of organizations ranging from the American Association of Universities to the National Association of Manufacturers. I urge my colleagues to support H.R. 6063 to ensure America's continued leadership and accomplishments in space and aeronautics over the next 50 years.

Madam Chairman, I reserve the balance of my time.

Mr. HALL of Texas. Madam Chairman, I yield myself such time as I may consume and make sure that I can reserve enough for those that will follow me.

Madam Chairman, H.R. 6063, sponsored by my good friend MARK UDALL, authorizes the National Aeronautics and Space Administration for fiscal year 2009. As our chairman has very adequately stated, it's a product of very close bipartisan consultation and cooperation led by Chairman UDALL and by Chairman GORDON.

Representative TOM FEENEY, ranking member of the Space and Aeronautics Subcommittee, and I are original cosponsors of this bill, and it builds a 1-year authorization. The intent of the bill is to keep NASA on its current path towards completing the International Space Station, retiring the Space Shuttle, maintaining a balanced set of science and aeronautics research programs, and developing a new launch system capable of taking humans beyond the low earth orbit, a feat the Shuttle cannot do.

The bill is also meant to reaffirm Congress's unwavering support for NASA so as to remove any doubt the next administration might have about Congress's commitment to NASA's program and to NASA's policies.

By being a 1-year bill, it also is designed, I think, to not tie the hands of the next administration to a long-term strategy. To the contrary, H.R. 6063 is designed to give the next President an opportunity to work with the next Congress to fashion a long-term strategy that is consistent with the administration's desires as well as the wishes of Congress.

H.R. 6063 contains a number of important provisions. It authorizes $19.2 billion for NASA for fiscal year 2009 and provides an additional $1 billion to accelerate development of the new *Constellation* crew vehicle launch system. It emphasizes that NASA should maintain a strong and balanced array of science, aeronautics, and human spaceflight programs and also directs NASA to fly out its full manifest of Shuttle missions, including those dedicated to flying spare parts to the International Space Station, as well as adding a flight to take the Alpha Magnetic Spectrometer to the ISS as we originally committed to do so some years ago. This experiment was stricken from the Shuttle manifest following the *Columbia* tragedy, but I think given the huge sunk investment in AMS, we ought to make good on our original commitments to fly this expensive instrument to the ISS.

H.R. 6063 directs NASA to continue the important task of developing the *Constellation* system which will provide our country with a modern, more robust and safer manned spaceflight capability that will enable our astronauts to fly out of low earth orbit, an ability we haven't had since the retirement of *Apollo* over 30 years ago.

As most of you are aware, once the Shuttle is retired at the end of this decade, our country will have to buy seats from the Russians for as long as maybe 5 years even to assure U.S. presence on the International Space Station. Our payments for rides on Soyuz spacecraft have not yet been negotiated, but it's going to be expensive. NASA estimates it will cost more than $2 billion, and sadly, we're making these purchases at a time when NASA will be laying off thousands of engineers and technicians from the Shuttle program in an effort to minimize our reliance on the Russians.

As I mentioned a moment ago, this bill authorizes an additional $1 billion to speed up the development of the new *Constellation* system. This initial investment is more than justified.

This bill also includes a number of provisions to encourage NASA working with the private sector to foster development of a domestic cargo launch capability primarily designed to take supplies to the space station. In addition, 6063 includes language directing NASA to solicit for commercial crew launch capability.

Turning to other parts of NASA, let me quickly say H.R. 6063 embraces a number of recommendations that were put forth by the witnesses from government, from industry, from academia, and testified, all of them testified in hearings before our committee over the previous 18 months. These are sensible provisions designed to strengthen aeronautic space science and earth science research programs, encourage technology, risk reduction policies and activities, foster efficient technology, transfer from NASA to other Federal agencies under the private sector, detect and mitigate the threat of near-earth objects, and research and monitor the effects of space weather on satellites.

□ 1530

This list is not exhaustive, but I wanted to mention these few examples to emphasize to all Members the breadth of this bill and how it improves upon many of NASA's activities and programs.

So as we stand here today, the space shuttle is in orbit, wrapping up another assembly mission to the International Space Station. May I add that the spouse of one of our Members, Representative GIFFORDS of Arizona, is currently commanding this mission.

NASA has had two other recent success activities. Just 15 days ago, the Phoenix Mars Lander successfully completed a soft landing on the red planet's surface and is in the early stages of searching for evidence of ice and organic compounds. And yesterday, NASA successfully launched a gamma-ray large area space telescope onboard a Delta II rocket.

These are but three of the most current NASA accomplishments. There are many, many other great achievements in aeronautics, space science, and Earth science research that I could talk about, but time doesn't permit. Suffice it to say that NASA is one of the most exciting and innovative Federal agencies, and it serves as a huge inspiration to our young people to take a serious interest in math and science education.

Before closing, I want to point out that during development of this bill, the subcommittee Democratic staff have been very open and forthright, sharing early ideas and drafts of the bill with our Republican staff. It has been a close and productive partnership, and I want to especially praise the work and hard work of my good, personal friend Dick Obermann. And I certainly want to thank our chairman, Chairman BART GORDON.

Madam Chairman, I reserve the balance of my time.

Mr. GORDON of Tennessee. Madam Chairman, first let me say very sincerely say that there is no Member of Congress that has had greater interest than Mr. HALL in NASA. As a Texan and a proud American, he has taken particular interest in the safety of the astronauts, as well as trying to reap the maximum amount of health benefits from the investment that we've made. He has played just an enormously constructive role, and I thank him for that.

We also thank Mr. UDALL, the chairman of the Space and Aeronautics Subcommittee, for working in a bipartisan way. He had a number of really thoughtful hearings. He's put together a bill that came out of his subcommittee unanimously, and because he did such a good job there, it was unanimous out of the full committee. So I thank my friend from Colorado.

I yield to the gentleman from Colorado (Mr. UDALL) 5 minutes.

(Mr. UDALL of Colorado asked and was given permission to revise and extend his remarks.)

Mr. UDALL of Colorado. I thank the gentleman for yielding.

Madam Chairman, earlier this year, I introduced the NASA Authorization Act of 2008, a bill to reauthorize the programs of the National Aeronautics and Space Administration for the fiscal year 2009. Today, I rise to urge my colleagues in the House of Representatives to pass this bill and send it on to the Senate.

The bill passed the Committee on Science and Technology and the Subcommittee on Space and Aeronautics with unanimous support, as our chairman pointed out. It represents a strong, bipartisan effort to ensure our continued leadership in space and aeronautics and to ensure that NASA's programs contribute to our science, technology, engineering, and mathematics education efforts, to our Nation's Innovation Agenda, and to practical benefits for our citizens.

I, too, want to thank Science and Technology Committee Chairman BART GORDON, Ranking Member RALPH HALL, and my fellow ranking member on the Space and Aeronautics Subcommittee, TOM FEENEY from Florida, for being original cosponsors, as well as providing thoughtful input into this bill.

I would also like to thank the excellent staff on both the majority and minority side for their outstanding work on this bill. On my staff, my dedicated and tireless staff member, Wendy Adams, Richard Obermann, Pam Whitney, Allen Li, and Devin Bryant, as well as John Piazza have all been instrumental in moving this bill forward.

I want to particularly point out the great contribution—I think the chairman would agree with me—of Dick Obermann. We benefit in the committee, the Nation benefits and this House of Representatives benefits from Dick's insights, his knowledge, and the relationships he's built. Anyone in the NASA orbit knows Dick Obermann's many, many contributions. So I want to particularly point out his great contributions to the committee and to NASA.

On the minority side, I want to thank Ed Feddeman, Ken Monroe, and Lee Arnold as well. They have been very helpful in the work on this piece of legislation.

Madam Chairman, the bill sets fiscally responsible policies and provisions for a balanced set of science, aeronautics, and human spaceflight programs.

The baseline funding level authorized for NASA in fiscal year 2009, $19.21 billion, represents simply an inflation increase of about 2.8 percent over the NASA Authorization Act of 2005, legislation that the President signed into law.

I don't want to go into great detail about the many provisions of the bill but will include my longer statement for the RECORD.

Madam Chairman, 2008 represents the 50th anniversary of the birth of the U.S. space program and the establishment of NASA. NASA has accomplished a great deal in both space and aeronautical R&D over these past five decades, and we can all take pride in what has been accomplished. However, we cannot become complacent.

The testimony and constructive input of countless hearings, witnesses, and outside experts and organizations that led to H.R. 6063 conveyed a consistent message: that NASA has not been given the funding it needs to successfully carry out all of the important tasks that the Nation has asked of it. If we fail to adequately invest in NASA now, it is unlikely that we will see a comparable record of accomplishment over the next five decades, at a great opportunity cost to the Nation.

I am gratified by the support that H.R. 6063 has garnered to date, including the Chamber of Commerce, the National Association of Manufacturers, the Aerospace Industries Association, the Association of American Universities, the University Corporation for Atmospheric Research, the International Federation of Professional and Technical Engineers, and the University Space Research Association.

I urge all my colleagues to support H.R. 6063 to ensure that our Nation remains the leader in space and aeronautics programs.

Madam Chairman, on May 15, 2008 I introduced the "NASA Authorization Act of 2008," H.R. 6063, a bill to reauthorize the programs of the National Aeronautics and Space Administration for Fiscal Year 2009.

Today I rise to urge my colleagues in the House of Representatives to pass this bill and send it on to the Senate.

This bill passed the Committee on Science and Technology and the Subcommittee on Space and Aeronautics with unanimous support.

It represents a strong bipartisan effort to ensure our leadership in space and aeronautics and to ensure that NASA's programs contribute to our science, technology, engineering, and mathematics (STEM) education efforts, to the Nation's innovation agenda, and to practical benefits for our citizens.

I would like to thank Science and Technology Committee Chairman BART GORDON, Ranking Minority Member RALPH HALL, and Space and Aeronautics Subcommittee Ranking Minority Member TOM FEENEY for being original cosponsors of this bill.

Madam Chairman, this bill sets fiscally-responsible policies and provisions for a balanced set of science, aeronautics, and human spaceflight programs.

The baseline funding level authorized for NASA in FY 2009—$19.21 billion— represents simply an inflationary increase of about 2.8 percent over the NASA Authorization Act of 2005, legislation that the President signed into law.

H.R. 6063 also reflects the conviction that NASA is as much a contributor to the nation's innovation agenda as any of the other agencies included in the America COMPETES Act that was enacted into law last year.

Thus, includes provisions and funding directed at supporting opportunities for hands-on training of the next generation of scientists and engineers.

In addition to the baseline authorization, H.R. 6063 contains a directed funding augmentation intended to help accelerate the date when the Orion Crew Exploration Vehicle and Ares Crew Launch Vehicle can attain operational status.

A series of policy failures over a number of years have brought us to the point where we will have an unavoidable gap in the United States' ability to get its astronauts into space independently.

Providing the additional funding in FY 2009 can help narrow the gap while also putting in place the space transportation system that will help us carry out exciting and important exploration missions beyond low Earth orbit in the decades to come.

Madam Chairman, NASA's programs are strongly relevant to addressing the nation's needs.

In short, a properly balanced and focused NASA portfolio can pay large dividends to our society as well as to our standing in the world, and maximizing the value of the NASA portfolio to the nation is one of the main goals of the NASA Authorization Act of 2008.

To that end, H.R. 6063 establishes a role for NASA in leading a cooperative international effort on Earth observations research and applications, especially with respect to climate change-one of the major challenges facing our generation.

In addition, the bill includes a series of provisions to ensure that NASA's aeronautics program gets the resources it needs to remain one of the most relevant activities of the agency—one that impacts our quality of life, public safety, the vitality of the economy, and our national security.

H.R. 6063 also includes provisions to ensure that the International Space Station—a unique orbiting R&D facility that represents a significant investment of resources by both American citizens and those of a host of other nations—will be utilized in as productive a manner as possible.

The ISS is also a compelling example of the value of undertaking a cooperative approach to space exploration. To that end, H.R. 6063 makes clear that any human exploration initiative to return to the Moon and venture to other destinations in the solar system should be undertaken as a cooperative international undertaking under strong U.S. leadership.

Madam Chairman, 2008 marks the 50th anniversary of the birth of the U.S. space program and the establishment of NASA.

NASA has accomplished a great deal in both space and aeronautical R&D over those past five decades, and we can all take pride in what has been accomplished. However, we cannot become complacent.

The testimony and constructive input of countless hearing witnesses, outside experts,

and organizations that led to H.R. 6063 conveyed a consistent message: that NASA has not been given the funding it needs to successfully carry out all of the important tasks that the nation has asked of it.

If we fail to invest adequately in NASA now, it is unlikely that we will see a comparable record of accomplishment over the next five decades—at a great opportunity cost to the nation.

I am gratified by the support that H.R. 6063 has garnered to date, including the Chamber of Commerce, the National Association of Manufacturers, the Aerospace Industries Association, the American Astronautical Society the American Institute of Aeronautics and Astronautics, the American Meteorological Society, the American Society of Mechanical Engineers, the Association of American Universities, the General Aviation Manufacturers Association, the Information Technology Association of America, the International Federation of Professional and Technical Engineers, the Institute of Electrical and Electronic Engineers-USA, the National Business Aviation Association, the National Space Society, the Personal Spaceflight Federation, the Planetary Society, the Universities Space Research Association, and the University Corporation for Atmospheric Research.

I urge my colleagues in the House of Representatives support H.R. 6063 to ensure that our Nation remains the leader in space and aeronautics programs.

Mr. HALL of Texas. Madam Chairman, I yield to Mr. FEENEY, the gentleman from Florida, 3 minutes.

Mr. FEENEY. I want to thank Ranking Member HALL and Chairman GORDON and, as they pointed out, all of the staff on both sides that made possible a bipartisan bill that got unanimous support in the committee.

I also want to suggest that terrific staff work on both sides and transparency and openness in the process is sort of a model that this Congress ought to try to emulate more often, and I want to thank, again, Chairman GORDON and Chairman UDALL for doing that.

By the way, this is likely to be, since he's not running for reelection, Chairman UDALL's last reauthorization as a House Member. He has been a champion on space issues. He's been a great friend and a delight to work with, and I know that he will continue to be a champion for space and aeronautics. And so I really appreciated the chance to work with you.

And following me I think at some point will be Congressman WELDON, my neighbor to the south. We share the different assets of Kennedy Space Center, Patrick Air Force Base, and Congressman WELDON will not be running for office again anytime soon, at least not the House. We appreciate DAVE WELDON's leadership. He's been a terrific advocate for space in general and Kennedy Space Center and human spaceflight in specific.

So it's been terrific to work with two great leaders that will not be working with us in all likelihood next year.

NASA was created in response to the Soviet Union's launch of Sputnik in 1957. The space age had begun. Fifty years have now passed. America is still the world's preeminent spacefaring Nation. NASA helped lead us to that status.

Today, we build on that foundation. We have laid out a comprehensive blueprint for sustaining a healthy and vigorous NASA during the next administration, and as Chairman GORDON pointed out, we don't know who the next President will be. We don't know who their next NASA administrator will be, but the starting point for the next administration's space program has been designed right here in the House of Representatives, thanks to the leadership of the people that you are hearing from.

Considerable care has been devoted to all elements of NASA's portfolio, human spaceflight, earth and space sciences, and aeronautics. I look forward to continued success and excellence in all of these endeavors. Each success sustains America's technical prowess and brings enormous prestige to the American people.

Because I represent the Kennedy Space Center, I want to particularly note this bill's unambiguous endorsement of America's human spaceflight program. By the way, all of our human spaceflight program has an international component to it.

Five years ago, America was stunned by the loss of the Shuttle Columbia. We had to re-examine our objectives for human spaceflight and articulate a more sustainable vision for our future spacefaring. We have done so, and this bill continues that progress by providing much-needed stability, on a bipartisan basis, in our strategy and architecture for human spaceflight.

The shuttle has resumed flight. We are having a successful mission as we speak today. We will complete the International Space Station and then strive to utilize its enormous potential. And we will also set forth to explore beyond lower orbit, starting with the moon and then beyond, for the future of humankind.

These are ambitious goals, but Americans are a strong, optimistic people willing to take up and meet any challenge. And as this bill highlights, America invites others throughout the world to join us in this journey. It is done on behalf of all mankind.

NASA's human space exploration and satellite programs publicly demonstrate America's spacefaring prowess. Other Nations are striving to achieve what America has already accomplished.

In prior generations, mastery of the sea and air brought global power and prestige. Today, such power and respect accrues to those mastering space. This bill sustains America's prowess in space, and I urge its passage.

Mr. GORDON of Tennessee. Madam Chairman, I recognize the gentlelady from Florida (Ms. WASSERMAN SCHULTZ) for 3 minutes.

Ms. WASSERMAN SCHULTZ. Madam Chairman, I rise to support the NASA authorization act and to thank Chairman GORDON and Representative UDALL for their leadership and exceptional work on this bill.

On May 31, I experienced the thrill of attending the most recent shuttle launch in Cape Canaveral, Florida. As I witnessed the intense brightness of the rockets' afterburners and felt the rumble of the Earth as the shuttle lifted off, I could feel the pride and strength of American innovation and technological leadership.

I have to tell you that I was surprised at how emotional I felt watching the shuttle hurtle towards the sky, and my heart really burst with pride in the American spirit and our ability to move forward generation after generation. The continuity of the space program is critical to maintaining this leadership.

The space shuttle is scheduled to retire in just 2 years, yet a lack of funding has delayed its replacement until at least 2015. Without adequate funding, not only would we lose jobs, but we would be forced to rely on Russia to access the International Space Station.

The economic return on our investment in the space program is far greater than many realize. In fact, NASA's budget accounts for less than six-tenths of 1 percent of the Federal budget, and yet the benefits of space exploration are vital to our daily lives.

Our TVs, cell phones and computers, as well as the military and weather forecasters all rely on satellite technology developed through space exploration.

Last year, Speaker PELOSI announced ''The Speaker's Innovation Agenda,'' an action plan to keep America as the leader in global science and technology. This agenda includes educating a new generation of innovators and committing to research and development.

By supporting NASA today, we are committing to innovate, to create new opportunities and markets, to drive discovery, and to push the boundaries and limitations that are before us.

It is vital that we instill this curiosity and drive in the next generation. I know it was instilled in the next generation that I'm raising because my son announced to me after he saw the shuttle launch, he said, ''Mom, I want to be an astronaut.''

And for me, as the National Chair of the Women's High Tech Coalition and co-chair of the Young Women's Task Force, I want to express particular support for the Hodes amendment, which establishes a scholarship program in honor of Christa McAuliffe, the teacher who died in the *Challenger* Space Shuttle disaster.

The scholarships will go to women pursuing degrees in mathematics, science, and engineering, and would further support women seeking careers in fields related to NASA's mission. We really need to expand the young women's and young girls' interest in the science and mathematical fields.

As leaders and legislators, we must work to harness the talent, intellect, and entrepreneurial spirit of Americans.

I urge my colleagues to support this bill to ensure that NASA has the resources to continue to promote American competitiveness.

Mr. HALL of Texas. Madam Chairman, I yield 3 minutes to Dr. WELDON, the gentleman from Florida.

□ 1545

Mr. WELDON of Florida. I thank the gentleman for yielding, and I rise in support of the underlying bill. And I commend the gentlelady from Florida for her inspiring words.

This bill is on the right track by extending shuttle operations, giving NASA the option to extend shuttle operations beyond 2010. Taking away the artificial 2010 deadline and allowing NASA to finish all the flights currently on the manifest will give NASA more flexibility and provide needed transportation to the International Space Station and help lessen the severity of the gap.

However, I want to underscore that this bill does not fix the problem established by this administration. And my hope is that the next administration and the next Congress will fix this problem of putting NASA and the United States in a situation where we will be dependent on the Russians to put our astronauts into space for possibly longer than 5 years.

The Government Accountability Office recently testified before a congressional committee indicating that there are a number of technological challenges facing the Constellation program, the program to replace the shuttle, and that delays in the program could occur and could lengthen this gap beyond the 4½ to 5 years that it currently is.

History has shown time and time again that complex technological problems often lead to delays, and that attempts at closing gaps can often be frustrated. Therefore, it is my opinion that the only way to assure that we do not get a lengthening of the gap, and the only way to make sure that we eliminate this gap is to extend shuttle operations.

Now, I was very disappointed in the Statement of Administration Policy on this bill that whoever was responsible for drafting this thing, they chose to dig up the canard that it is unsafe to extend shuttle operations beyond 2010. The truth is that the last shuttle that flies in 2010 will be the same shuttle that flies in 2011 if we extend shuttle operations. And if we are to argue that it is unsafe to fly the shuttle beyond 2010, you could just as easily argue that it's unsafe to fly it today. The truth is, after the improvements that have been made after the Columbia and the Challenger disasters, the shuttle that flies today is the safest shuttle that we have ever flown. And yes, going into outer space has its risks, but we choose to do so because we are a Nation of explorers, and we feel that the risks are justified for the benefits of space exploration.

I just also want to point out that relying on the Soyuz vehicle—supposedly because it's safer, as the administration is implying in their statement—is not exactly correct. We just recently saw a situation where the returning Soyuz vehicle was thrown off course into a dangerous ballistic reentry, exposing the astronauts on board, including a female astronaut, Peggy Whitson, to very dangerous G forces.

The CHAIRMAN. The time of the gentleman has expired

Mr. HALL of Texas. I yield the gentleman an additional minute.

Mr. WELDON of Florida. This bill is a step in the right direction. It gives NASA the ability to extend shuttle operations. And I want to just point out, there is a very important scientific mission, the Alpha Magnetic Spectrometer mission. We spent $1.5 billion building that piece of machinery, and NASA's current plan is to leave it on the ground. This bill correctly calls for launching that mission, and it is the right thing to do. To spend all that money to build that thing and then to never launch it is just wrong.

However, I do want to underscore that the future Congress and the next administration is going to have to wrestle with the issue of getting the funding in the appropriation process. But I just want to say that, based on current economic growth, over the next 5 to 7 years 1 trillion additional dollars is going to come into this U.S. Treasury.

This is a matter of priorities. The American people support our space program. It's the right thing to do to keep the shuttle flying beyond 2010.

Mr. GORDON of Tennessee. Madam Chairman, I yield 3 minutes to another friend and champion of the space program from Texas (Mr. LAMPSON).

Mr. LAMPSON. Madam Chairman, I am honored to join my colleagues from the Science Committee to support H.R. 6063. I particularly want to commend Chairman GORDON and Chairman UDALL, and Ranking Members HALL and FEENEY, the committee staff, for all of their hard work and their effort to make this an inclusive process. This legislation enjoys broad support, and I believe that it provides the stability and direction necessary to sustain NASA through this transition period.

I am proud that we will be able to provide a much needed 11 percent increase in the funding over FY08 that will help NASA get back on track. This inflationary increase will allow NASA to operate the shuttle program, accelerate the development of Constellation, and refocus its efforts on science and research without having to rob Peter to pay Paul.

I'm also pleased that this legislation directs NASA to fly the ''contingency flights'' and to take all necessary steps to deliver the Alpha Magnetic Spectrometer that we just heard about from our colleague, Mr. WELDON to the International Space Station. This will ensure the space station's viability and use for its intended purpose as a national lab well into the next decade.

In addition to being one of the most valuable foreign policy tools that we have, there is no doubt in my mind that research conducted on the space station will yield great discoveries that will benefit all Americans and all of mankind.

I would especially like to thank the chairmen and ranking members for adopting language on issues that I have particularly championed and believe will also help secure NASA's future. This includes the Small Business Alliance Outreach and Technology Assistance Program (SATOP).

Building on the partnership between NASA centers, institutions of higher learning, and industry partners, this initiative will further the agency's mission of technology transfer in a unique way by providing free technical assistance to small businesses who cannot afford to have an engineer or a rocket scientist on their staff. Solving technical problems will mean these businesses will help grow our economy and create and retain jobs.

I have also worked to make sure that, as we face the space flight gap and the loss of a highly skilled workforce, that we are cognizant of the fact that we risk losing the imagination of the next generation of scientists and engineers and diminishing their desire to serve our Nation's space program.

Well, the fact that we are already falling behind when it comes to awarding advanced degrees in math, science and engineering means that we must focus on K–12 education now more than ever so that we don't lose our technological edge.

This bill provides an 11 percent increase over FY08 funding, including NASA's educational programs. I believe that some of this increase should go toward continuing the EarthKAM program and expanding NASA's participation in robotics competition. Bringing NASA directly into classrooms across the country and encouraging hands-on learning is a great way to spark a hopefully life-long interest in math and science.

So as we continue with this transition from shuttle to Constellation and a new administration in about 6 months, we must be mindful of providing stability and support for our Nation's space program at this critical juncture. I believe this bill provides both, and I urge my colleagues to support it.

Mr. GORDON of Tennessee. Madam Chairman, I yield 4 minutes to the chairman of the Technology Innovation Subcommittee, Mr. WU of Oregon.

Mr. WU. Madam Chairman, I rise as a cosponsor in support of H.R. 6063.

When NASA was born in response to the launch of Sputnik, many Americans were scared of what it meant for

Russia to have space capabilities. Congress' passage of the National Aeronautics and Space Act of 1958 created NASA and marked the beginning of the space race between America and Russia.

Just 11 years after NASA was created, and only 9 years after President Kennedy threw a cap over the wall, the United States landed the first humans on the Moon. Since then, NASA has had its share of its successes and challenges, but in the end NASA is an example of what can be accomplished when the President and Congress share a vision, a common vision, and when funds are devoted toward that vision.

As Speaker PELOSI says, ''a budget is the tangible embodiment of our values, of what is important to us and what is not.'' We are considering this bill 50 years after the creation of NASA. We are at a singular point in time, the space shuttle will retire soon. And while we develop the next generation crew exploration vehicle, we will, for the first time, rely on other countries to take Americans to space. In the meantime, more and more countries are developing space capabilities. To keep us in the game, this bill provides an extra $1 billion to accelerate the development of the next crew exploration vehicle and shorten the American space flight gap.

Space has become more competitive. Where we only competed with Russia, we will soon compete with several countries to maintain our leadership in space. This bill includes a provision to ensure that the United States leads an international cooperation initiative with these countries promoting the peaceful exploration of space.

Today, NASA is funded at a much lower percentage of our GDP than when it was first created. At a time when other countries are aggressively investing in their space capabilities, Congress needs to send the message that it continues to support NASA and its mission by providing the appropriate and necessary funds. This bill does just that. And I want to commend Mr. UDALL, Chairman GORDON, and Ranking Member HALL for a very strong bill, and I urge its passage.

Mr. HALL of Texas. Madam Chairman, I yield 2 minutes to the gentleman from California (Mr. ROHRABACHER).

Mr. ROHRABACHER. First and foremost, I would like to congratulate my colleagues for the hard work that's been put into this legislation, MARK UDALL and BART GORDON, of course, on the majority side, and also, of course, TOM FEENEY and RALPH HALL on the minority side of this. This is a bipartisan effort. It always has been.

RALPH HALL will be submitting my amendment for me, which will be the second amendment up today. Let me just note that my amendment simply suggests that NASA should put on its priority list seeking cooperation between the United States and our European and Russian friends to try to have an international effort to detect and deflect near-Earth objects. What that means is, if there are asteroids or comets that might be out there and might threaten the Earth, perhaps threatening millions of lives, that my amendment simply says the United States should not bear the entire burden and cost of identifying them and tracing their trajectory to see if they threaten the Earth, but we should be trying to recruit our friends and make it an international effort.

I just recently came back from Berlin and Moscow, where this idea received a very, very warm response from these other spacefaring nations, and they're really anxious to work with us. This instructs NASA to take advantage of that spirit of cooperation, take the burden off the American taxpayers a little bit, and make sure this job gets done.

I appreciate that Chairman GORDON and Ranking Member HALL have both supported this legislation. And RALPH will be submitting it for me in a few minutes.

Thank you very much, BART. Thank you very much, RALPH. And I want to thank all of you and the staff for doing such a great job in this committee.

Mr. GORDON of Tennessee. Madam Chairman, I yield 3 minutes to the gentlelady from Texas, a great supporter of NASA, Ms. JACKSON-LEE.

(Ms. JACKSON-LEE of Texas asked and was given permission to revise and extend her remarks.)

Ms. JACKSON-LEE of Texas. Let me thank the distinguished chairman of the committee. It's really good to be with him, in spite of holding us over. We are still here fighting the good fight.

Chairman GORDON, thank you for your leadership and the work that you've done, of course, with the chairman of the subcommittee, Mr. UDALL, and my very dear colleague, who has been an advocate, Congressman NICK LAMPSON, who has worked closely on this issue, to the ranking member, Mr. HALL, and of course the ranking members on the respective committees. I rise today to enthusiastically support this legislation dealing with NASA's authorization.

I was reflecting on the history of authorization, and the committee should be commended. This is not a very easy task to get an authorization bill out, and we have done so. And I'm very proud that this Congress, this Democratic Congress has done so.

Today's legislation will allow NASA to continue to push the boundaries of what is possible, keeping our Nation on the forefront of innovation and exploration. After the *Columbia* disaster, NASA stands at a pivotal moment in its history. It is the responsibility of this Congress to ensure that the future of NASA is one of continued progress. Our children depend on us to do this.

Space exploration remains part of our national destiny. Knowing the cutting edge of technology, the research on HIV/AIDS, on stroke, on heart disease, on cancer, all of this has occurred through NASA exploration and the International Space Station. It inspires our children to look at the stars and dream of what they, too, one day may achieve.

Space exploration allows us to push the bounds of our scientific knowledge as we carry out research projects not possible within the constraints of the planet Earth. Just an anecdote, when I have an annual Christmas party of 3,000 children, the astronauts that come are more popular than Santa Claus. That should be the test for continuing this wonderful effort to ensure that America always stands at the forefront of innovativeness.

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As a Nation, we have made tremendous strides forward in the pursuit of space exploration since President John F. Kennedy set the course for our Nation in 1962 calling it the ''greatest adventure on which man has ever embarked.'' Despite the setbacks of recent years, including the tragedy that befell the Space Shuttles *Columbia* and *Challenger*, NASA and the American people have refused to abandon the pursuit of knowledge of our universe. On October 1, 1958, NASA began its operation. It consisted of only about 8,000 employees and an annual budget of $100 million, but it is now in its 50th year, and we are going further.

President Kennedy in 1961 said, ''I believe this Nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to Earth.''

Believe it not, we have now had men going into space, and we have just recently had the fiftieth woman going into space. This is an important challenge. And this legislation today provides us with an opportunity to save the 18,000 employees and to begin to look to a funding system that will continue our journey.

H.R. 6063 is addressing serious concerns. Between 2010, when the space shuttle will be phased out, and 2015 when the next generation human space flight is likely to become operational, the United States will have no method of transportation to the space station that we have already invested in.

The CHAIRMAN. The time of the gentlewoman has expired.

Mr. GORDON of Tennessee. I yield the gentlewoman 1 additional minute.

Ms. JACKSON-LEE of Texas. With this legislation, we are going to deliver important hardware, the Alpha Magnetic Spectrometer, through an additional extension. The bill also authorizes $1 billion in augmented funding to accelerate the development of the Orion Crew Exploration Vehicle, the successor to the space shuttle, in hopes of narrowing the gap.

We are also allowing one more shuttle trip for the space shuttle. This is helpful to Johnson. We don't want to

lose jobs. We want to support this effort. And we may want to reconsider, as we go forward, the retiring of the space shuttle.

Let me thank the committee for supporting, as well, my small business amendment that addresses the question of giving training, technological training, to veterans-owned businesses, to HUB businesses, to women-owned businesses and minority-owned businesses so they can be part of the cutting edge of science.

I conclude simply by saying that President Kennedy set the mark. I am glad this committee and this Congress is carrying the torch. We must continue space exploration. It is our duty. It is our challenge. It is our obligation as patriots. And it is for the future of our children. On with the space. This legislation gets us there.

Madam Chairman, I rise today in strong support of H.R. 6063, the National Aeronautics and Space Administration Authorization Act of 2008. As we mark the 50th anniversary of the establishment of the United States space program, this legislation reaffirms the ever growing and changing role of NASA, providing resources to carry the agency forward with its ambitious agenda of research, exploration, and discovery. I would like to thank Congressman UDALL for introducing this important legislation, as well as Science Committee Chairman GORDON for his leadership in bringing this bill to the floor today.

I would also like to thank Chairman GORDON for his support of an amendment that I am offering. My amendment modifies section 1108 of the bill, and it states:

(1) in subsection (a), strike ''small businesses'' and insert ''small, minority-owned, and women-owned businesses''; and

(2) In subsection (b)(2), insert '', giving preference to socially and economically disadvantaged small business concerns, small business concerns owned and controlled by service-disabled veterans, and HUB Zone small business concerns'' after ''to small businesses.''

My amendment clarifies that the NASA Outreach and Technology Assistance Program will include small, minority-owned, and women-owned businesses. It would also give preference, in selection of businesses to participate in the program, to socially and economically disadvantaged small business concerns, small business concerns owned and controlled by service-disabled veterans, and HUBZone small business concerns. I would like to thank my colleague and fellow Texan, Congressman LAMPSON, for his leadership in authoring the important section describing the NASA Outreach and Technology Assistance Program, and for supporting my amendment.

Madam Chairman, today's legislation will allow NASA to continue to push the boundaries of what is possible, keeping our nation on the forefront of innovation and exploration. After the Columbia disaster, NASA stands at a pivotal moment in its history. It is the responsibility of this Congress to ensure that the future of NASA is one of continued progress. Space exploration remains a part of our national destiny. It inspires our children to look to the stars and dream of what they too, one day, may achieve. Space exploration allows us to push the bounds of our scientific knowledge, as we carry out research projects not possible within the constraints of the planet Earth. As a nation, we have made tremendous strides forward in the pursuit of space exploration since President John F. Kennedy set the course for our nation in 1962, calling it the ''greatest adventure on which man has ever embarked.'' Despite the setbacks of recent years, including the tragedy that befell the Space Shuttle *Columbia*, NASA and the American people have refused to abandon the pursuit of knowledge of our universe. On October 1, 1958, the National Aeronautics and Space Administration began operation. At the time it consisted of only about 8,000 employees and an annual budget of $100 million. Over the next 50 years, NASA and the Jet Propulsion Laboratory have been involved in many defining events occurred which have shaped the course of human history and demonstrated to the world the character of the people of the United States.

Many of us remember how inspired we were when on May 25, 1961, President John F. Kennedy proclaimed: ''I believe this Nation should commitment itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to earth. No single space project in this period will be more impressive to mankind, or more important for the long-range exploration of space; and none will be so difficult or expensive to accomplish.'' The success of the United States space exploration program in the 20th Century augurs well for its continued leadership in the 21st Century. This success is largely attributable to the remarkable and indispensable partnership between the National Aeronautics and Space Administration and its 10 space and research centers. One of these important research centers is located in my home city of Houston. The Johnson Space Center, which manages the development, testing, production, and delivery of all United States human spacecraft and all human spacecraft-related functions, is one of the crown jewels of the Houston area.

Today, NASA is the nations' primary civil space and aeronautics research and development agency, and its current activities employ over 18,000 Americans. Today's legislation reaffirms the fundamental operating principles of NASA, emphasizes the importance of NASA leadership in a range of endeavors such as Earth observations and research, aeronautics reach and development, and an exploration program. It authorizes $20.21 billion in NASA funding for FY 2009.

Madam Chairman, in addition to this funding, H.R. 6063 begins to address what many of us believe is a serious problem that we will face in the coming years. Between 2010, when the space shuttle will be phased out, and 2015, when the next-generation human spaceflight vehicle is likely to become operational, the United States will have no method of transportation to the International Space Station, which we have already invested a great deal of American resources in. This legislation allows for an additional space shuttle flight to the International Space Station, to deliver important hardware (the Alpha Magnetic Spectrometer). The bill also authorizes $1 billion in augmented funding to accelerate the development of the Orion Crew Exploration Vehicle, the successor to the space shuttle, in hopes of narrowing the gap.

Always on the forefront of technological innovation, NASA has been home to countless ''firsts'' in the field of space exploration. America has, countless times, proven itself to be a leader in innovation, and many technologies that have become part of our everyday lives were developed by NASA scientists. The benefits of NASA's programming and innovation are felt far beyond scientific and academic spheres. Space technologies provide practical, tangible benefits to society, and NASA provides valuable opportunities to businesses in our community. I strongly urge my colleagues to join me in support of this legislation, and in support of the future of American innovation and exploration.

Mr. HALL of Texas. Madam Chairman, I have no further speakers.

I yield back the balance of my time.

Mr. GORDON of Tennessee. In conclusion, Madam Chairman, let me once again thank my partner and friend from Texas (Mr. HALL) for his help and leadership in putting this bill together. RALPH, this is the 36th bill that we have brought to this floor, all of which have been bipartisan. All but one has been unanimous. Thank you for your help.

Mr. WILSON of Ohio. Madam Chairman, I rise today in support of H.R. 6063, the NASA Authorization Act of 2008.

Since the beginning of flight, my home State of Ohio has played a critical role in the aerospace industry. From Wilbur and Orville Wright and the invention of the airplane, to the first American-manned orbital mission by Senator John Glenn, to Neil Armstrong's famous walk on the Moon—Ohioans have been instrumental in maintaining the United States leadership in space.

Fifty years after the creation of NASA, Ohio continues to play an important role in the aerospace industry. Ohio's NASA Glenn facility pioneered the use of liquid hydrogen as a rocket fuel—enabling astronauts to reach the Moon. And today, NASA Glenn is working to build cutting-edge vehicles that will one day send a new generation of explorers to the Moon and Mars.

NASA's economic impact in Ohio is deep and far-reaching. Today, Ohio's aerospace industry includes 600 companies and employs more than 66,000 Ohioans each year.

It is clear that NASA provides significant benefits to the American people. That's why I am proud to support H.R. 6063. It is a fiscally responsible bill that works to ensure that NASA has the resources it needs to successfully conduct a balanced set of missions in human spaceflight, science, and aeronautics.

This bill recognizes that NASA is an important contributor to the Nation's innovation agenda and builds on the provisions included in last year's ''America COMPETES Act.'' H.R. 6063 includes provisions that will provide our Nation's next generation of engineers and scientists with the hands-on training and education they need to advance our space program.

Madam Chairman, on the 50th anniversary of the U.S. space program and the establishment of NASA, I urge my colleagues in joining with me in supporting this important bill.

Mr. CALVERT, Madam Chairman, I commend Subcommittee Chairman UDALL, Chairman GORDON and Ranking Members HALL and FEENEY and their staff for their work on this bipartisan bill. It is most appropriate that we recommit our Federal support and investment to

our Nation's civilian space and aeronautics agency during this 50 anniversary year.

NASA has been the Nation's leading catalyst for innovation and technology based on 50 years of broad public support and strong bipartisan political leadership. The agency's work is linked to larger issues like national security, global warming, and American competitiveness. This valuable research is also the genesis of tens of thousands of high-tech jobs in America and millions of dollars into our economy.

H.R. 6063 largely follows in the tradition of the NASA Authorization Act of 2005, the first authorization bill to endorse the Vision for Space Exploration which chartered the agency to move beyond low-Earth orbit.

I enthusiastically support most measures in this reauthorization including: the reasonable increase in authorization levels which allows the agency to maintain a balanced and robust portfolio of exploration, science and aeronautics activities; the accelerated development of the Orion and Ares launch systems in order to minimize U.S. reliance on Russia for access to the International Space Station; and the full authorization of the Commercial Orbital Transportation Services program, as well as the funding to develop a commercial crew capability under this program.

I am somewhat concerned about language that may inappropriately tie the administrator's hands by requiring three shuttle flights; two contingency and one for the Alpha Magnetic Spectrometer, before the fleet's final retirement. I understand why the committee has included the language but I also encourage the Science Committee leadership to work with the NASA administrator to alleviate the outstanding concerns about NASA's ability to properly manage the shuttle fleet and the remaining flight manifest without the mandated flexibility; especially if under unexpected budget and safety constraints.

Overall, I am happy to lend my strong support to this reauthorization. I believe it does a comprehensive job of providing NASA the rules and tools to succeed in this Second Space Age. There is not a NASA center in the 44th Congressional District of California, but I understand the criticality of the agency's success and its impact on our Nation's prosperity. I encourage all my colleagues to rediscover the many ways our constituents benefit from the agency's important work. We do not consider this legislation in a vacuum. Other nations are actively pursuing human spaceflight and exploration. China and India are out-producing us in engineering graduates each year many times over. NASA, with its excellent reputation in exploration, science and aeronautics is the one national agency which can focus and inspire America's youth to take up the challenging work of math and science careers.

Again, I want to thank the Science Committee leadership and their hard-working staff for their efforts in putting together this bill. I understand it will be important to have a solid civilian space and aeronautics blueprint for the next Administration to follow. I encourage my colleagues to support H.R. 6063.

Ms. EDDIE BERNICE JOHNSON of Texas. Madam Chairman, the National Aeronautics and Space Administration is a strong economic driver in the State of Texas and an important national resource.

My colleagues and I on the House Committee on Science and Technology have worked on this legislation to reauthorize many of NASA's programs for 1 year. This action will provide a funding bridge until next year, and it will provide important funding for research and programs in the areas of science, aeronautics, exploration, education, space operations, cross-agency support programs and other activities.

NASA celebrates 50 years since its establishment. For 50 years, NASA research has enabled scientists to continue to do groundbreaking research in a zero-gravity environment, with untold benefits. For example, one of the many spinoff technologies from the Hubble telescope is the use of its Charge Coupled Device (CCD) chips for digital imaging breast biopsies.

The resulting device images tissue more clearly and efficiently than other technologies. The CCD chips can detect the small differences between a malignant or benign tumor, without the need for a surgical biopsy. This saves the patient weeks of recovery time, and the cost for this procedure is hundreds of dollars vs. thousands for a surgical biopsy. With over 500,000 women needing biopsies a year, the economic benefits are tremendous, not to mention the reduction in pain, scarring, radiation exposure, time, and money associated with surgical biopsies. Of course, this is just one of so many examples of NASA research that benefits society with broader applications.

H.R. 6063 authorizes $20.21 billion in funding for NASA in fiscal year 2009. I support this legislation and urge NASA to continue its education efforts. A well-educated technical workforce is essential to NASA's success, and it is imperative for the agency to continue to invest in education as well as its other activities.

Again, I want to congratulate NASA for 50 years of stellar work.

Mr. COSTELLO. Madam Chairman, I rise today in support of H.R. 6063, which authorizes the National Aeronautics and Space Administration (NASA) for fiscal year 2009. As a member of the Science and Technology Committee, I am pleased that this bill has reached the floor with the full bipartisan support of the committee. H.R. 6063 reaffirms the basic principles that NASA is and should remain a multi-mission agency with a balanced portfolio of programs in science, aeronautics, and human space flight, including human and robotic exploration beyond low-Earth orbit.

This year marks the 50th anniversary of the establishment of the National Aeronautics and Space Administration (NASA) and the dawn of the United States space program. H.R. 6063 honors this accomplishment with an affirmation of the administration's goals of transitioning to new space vehicles, sending astronauts to Mars and repairing the Hubble telescope. I believe this bill makes important investments in aeronautic research and development while continuing NASA's important work to carry us into the next half century of space exploration. Madam Chairman, I encourage my colleagues to support this bill.

Mr. GORDON of Tennessee. I yield back the balance of my time.

The CHAIRMAN. All time for general debate has expired.

Pursuant to the rule, the amendment in the nature of a substitute printed in the bill shall be considered as an original bill for the purpose of amendment under the 5-minute rule and shall be considered read.

The text of the committee amendment is as follows:

H.R. 6063

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the ''National Aeronautics and Space Administration Authorization Act of 2008''.

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. Findings.
Sec. 3. Definitions.

TITLE I—AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 2009

Sec. 101. Fiscal year 2009.

TITLE II—EARTH SCIENCE

Sec. 201. Goal.
Sec. 202. Governance of United States Earth observations activities.
Sec. 203. Decadal survey missions.
Sec. 204. Transitioning experimental research into operational services.
Sec. 205. Landsat thermal infrared data continuity.
Sec. 206. Reauthorization of Glory Mission.
Sec. 207. Plan for disposition of Deep Space Climate Observatory.

TITLE III—AERONAUTICS

Sec. 301. Environmentally friendly aircraft research and development initiative.
Sec. 302. Research alignment.
Sec. 303. Research program to determine perceived impact of sonic booms.
Sec. 304. External review of NASA's aviation safety-related research programs.
Sec. 305. Interagency research initiative on the impact of aviation on the climate.
Sec. 306. Research program on design for certification.
Sec. 307. Aviation weather research.
Sec. 308. Joint Aeronautics Research and Development Advisory Committee.
Sec. 309. Funding for research and development activities in support of other mission directorates.
Sec. 310. University-based centers for research on aviation training.

TITLE IV—INTERNATIONAL EXPLORATION INITIATIVE

Sec. 401. Sense of Congress.
Sec. 402. Stepping stone approach to exploration.
Sec. 403. Lunar outpost.
Sec. 404. Exploration technology development.
Sec. 405. Exploration risk mitigation plan.
Sec. 406. Exploration crew rescue.
Sec. 407. Participatory exploration.
Sec. 408. Science and exploration.

TITLE V—SPACE SCIENCE

Sec. 501. Technology development.
Sec. 502. Provision for future servicing of observatory-class scientific spacecraft.
Sec. 503. Mars exploration.
Sec. 504. Importance of a balanced science program.
Sec. 505. Restoration of radioisotope thermoelectric generator material production.
Sec. 506. Assessment of impediments to interagency cooperation on space and Earth science missions.
Sec. 507. Assessment of cost growth.
Sec. 508. Outer planets exploration.

TITLE VI—SPACE OPERATIONS

Subtitle A—International Space Station

Sec. 601. Utilization.
Sec. 602. Research management plan.
Sec. 603. Contingency plan for cargo resupply.

Subtitle B—Space Shuttle

Sec. 611. Flight manifest.

Sec. 612. Disposition of shuttle-related assets.
Sec. 613. Space Shuttle transition liaison office.
Subtitle C—Launch Services
Sec. 621. Launch services strategy.
TITLE VII—EDUCATION
Sec. 701. Response to review.
Sec. 702. External review of Explorer Schools program.
TITLE VIII—NEAR-EARTH OBJECTS
Sec. 801. In general.
Sec. 802. Findings.
Sec. 803. Requests for information.
Sec. 804. Establishment of policy.
Sec. 805. Planetary radar capability.
Sec. 806. Arecibo Observatory.
TITLE IX—COMMERCIAL INITIATIVES
Sec. 901. Sense of Congress.
Sec. 902. Commercial crew initiative.
TITLE X—REVITALIZATION OF NASA INSTITUTIONAL CAPABILITIES
Sec. 1001. Review of information security controls.
Sec. 1002. Maintenance and upgrade of Center facilities.
Sec. 1003. Assessment of NASA laboratory capabilities.
TITLE XI—OTHER PROVISIONS
Sec. 1101. Space weather.
Sec. 1102. Space traffic management.
Sec. 1103. Study of export control policies related to civil and commercial space activities.
Sec. 1104. Astronaut health care.
Sec. 1105. National Academies decadal surveys.
Sec. 1106. Innovation prizes.
Sec. 1107. Commercial space launch range study.
Sec. 1108. NASA outreach and technology assistance program.

SEC. 2. FINDINGS.

The Congress finds, on this, the 50th anniversary of the establishment of the National Aeronautics and Space Administration, the following:

(1) NASA is and should remain a multimission agency with a balanced and robust set of core missions in science, aeronautics, and human space flight and exploration.

(2) Investment in NASA's programs will promote innovation through research and development, and will improve the competitiveness of the United States.

(3) Investment in NASA's programs, like investments in other Federal science and technology activities, is an investment in our future.

(4) Properly structured, NASA's activities can contribute to an improved quality of life, economic vitality, United States leadership in peaceful cooperation with other nations on challenging undertakings in science and technology, national security, and the advancement of knowledge.

(5) NASA should assume a leadership role in a cooperative international Earth observations and research effort to address key research issues associated with climate change and its impacts on the Earth system.

(6) NASA should undertake a program of aeronautical research, development, and where appropriate demonstration activities with the overarching goals of—

(A) ensuring that the Nation's future air transportation system can handle up to 3 times the current travel demand and incorporate new vehicle types with no degradation in safety or adverse environmental impact on local communities;

(B) protecting the environment;

(C) promoting the security of the Nation; and

(D) retaining the leadership of the United States in global aviation.

(7) Human and robotic exploration of the solar system will be a significant long term undertaking of humanity in the 21st century and beyond, and it is in the national interest that the United States should assume a leadership role in a cooperative international exploration initiative.

(8) Developing United States human space flight capabilities to allow independent American access to the International Space Station, and to explore beyond low Earth orbit, is a strategically important national imperative, and all prudent steps should thus be taken to bring the Orion Crew Exploration Vehicle and Ares I Crew Launch Vehicle to full operational capability as soon as practicable.

(9) NASA's scientific research activities have contributed much to the advancement of knowledge, provided societal benefits, and helped train the next generation of scientists and engineers, and those activities should continue to be an important priority.

(10) NASA should make a sustained commitment to a robust long-term technology development activity. Such investments represent the critically important ''seed corn'' on which NASA's ability to carry out challenging and productive missions in the future will depend.

(11) NASA, through its pursuit of challenging and relevant activities, can provide an important stimulus to the next generation to pursue careers in science, technology, engineering, and mathematics.

(12) Commercial activities have substantially contributed to the strength of both the United States space program and the national economy, and the development of a healthy and robust United States commercial space sector should continue to be encouraged.

(13) It is in the national interest for the United States to have an export control policy that protects the national security while also enabling the United States aerospace industry to compete effectively in the global market place and the United States to undertake cooperative programs in science and human space flight in an effective and efficient manner.

SEC. 3. DEFINITIONS.

In this Act:

(1) ADMINISTRATOR.—The term ''Administrator'' means the Administrator of NASA.

(2) NASA.—The term ''NASA'' means the National Aeronautics and Space Administration.

(3) NOAA.—The term ''NOAA'' means the National Oceanic and Atmospheric Administration.

(4) OSTP.—The term ''OSTP'' means the Office of Science and Technology Policy.

TITLE I—AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 2009

SEC. 101. FISCAL YEAR 2009.

(a) BASELINE AUTHORIZATION.—There are authorized to be appropriated to NASA for fiscal year 2009 $19,210,000,000, as follows:

(1) For Science, $4,932,200,000, of which—

(A) $1,518,000,000 shall be for Earth Science, including $29,200,000 for suborbital activities and $2,500,000 for carrying out section 313 of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155);

(B) $1,483,000,000 shall be for Planetary Science, including $486,500,000 for the Mars Exploration program, $2,000,000 to continue planetary radar operations at the Arecibo Observatory in support of the Near-Earth Object program, and $5,000,000 for radioisotope material production, to remain available until expended;

(C) $1,290,400,000 shall be for Astrophysics, including $27,300,000 for suborbital activities;

(D) $640,800,000 shall be for Heliophysics, including $50,000,000 for suborbital activities; and

(E) $75,000,000 shall be for Cross-Science Mission Directorate Technology Development, to be taken on a proportional basis from the funding subtotals under subparagraphs (A), (B), (C), and (D).

(2) For Aeronautics, $853,400,000, of which $406,900,000 shall be for system-level research, development, and demonstration activities related to—

(A) aviation safety;

(B) environmental impact mitigation, including noise, energy efficiency, and emissions;

(C) support of the Next Generation Air Transportation System initiative; and

(D) investigation of new vehicle concepts and flight regimes.

(3) For Exploration, $3,886,000,000, of which $100,000,000 shall be for the activities under sections 902(b) and 902(d); and $737,800,000 shall be for Advanced Capabilities, including $106,300,000 for the Lunar Precursor Robotic Program, $276,500,000 for International Space Station-related research and development activities, and $355,000,000 for research and development activities not related to the International Space Station.

(4) For Education, $128,300,000.

(5) For Space Operations, $6,074,700,000, of which—

(A) $150,000,000 shall be for an additional Space Shuttle flight to deliver the Alpha Magnetic Spectrometer to the International Space Station;

(B) $100,000,000 shall be to augment funding for International Space Station Cargo Services to enhance research utilization of the International Space Station, to remain available until expended; and

(C) $50,000,000 shall be to augment funding for Space Operations Mission Directorate reserves and Shuttle Transition and Retirement activities.

(6) For Cross-Agency Support Programs, $3,299,900,000.

(7) For Inspector General, $35,500,000.

(b) ADDITIONAL AUTHORIZATION TO ADDRESS HUMAN SPACE FLIGHT GAP.—In addition to the sums authorized by subsection (a), there are authorized to be appropriated for the purposes described in subsection (a)(3) $1,000,000,000 for fiscal year 2009, to be used to accelerate the initial operational capability of the Orion Crew Exploration Vehicle and the Ares I Crew Launch Vehicle and associated ground support systems, to remain available until expended.

TITLE II—EARTH SCIENCE

SEC. 201. GOAL.

The goal for NASA's Earth Science program shall be to pursue a program of Earth observations, research, and applications activities to better understand the Earth, how it supports life, and how human activities affect its ability to do so in the future. In pursuit of this goal, NASA's Earth Science program shall ensure that securing practical benefits for society will be an important measure of its success in addition to securing new knowledge about the Earth system and climate change. In further pursuit of this goal, NASA shall assume a leadership role in developing and carrying out a cooperative international Earth observations-based research and applications program.

SEC. 202. GOVERNANCE OF UNITED STATES EARTH OBSERVATIONS ACTIVITIES.

(a) STUDY.—The Director of the OSTP shall enter into an arrangement with the National Academies for a study to determine the most appropriate governance structure for United States Earth Observations programs in order to meet evolving United States Earth information needs and facilitate United States participation in global Earth Observations initiatives.

(b) REPORT.—The Director shall transmit the study to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 18 months after the date of enactment of this Act, and shall provide OSTP's plan for implementing the study's recommendations not later than 24 months after the date of enactment of this Act.

SEC. 203. DECADAL SURVEY MISSIONS.

(a) IN GENERAL.—The missions recommended in the National Academies' decadal survey ''Earth Science and Applications from Space'' provide the basis for a compelling and relevant program of research and applications, and the

Administrator should work to establish an international cooperative effort to pursue those missions.

(b) PLAN.—The Administrator shall prepare a plan for submission to Congress not later than 270 days after the date of enactment of this Act that shall describe how NASA intends to implement the missions recommended as described in subsection (a), whether by means of dedicated NASA missions, multi-agency missions, international cooperative missions, data sharing, or commercial data buys, or by means of long-term technology development to determine whether specific missions would be executable at a reasonable cost and within a reasonable schedule.

SEC. 204. TRANSITIONING EXPERIMENTAL RESEARCH INTO OPERATIONAL SERVICES.

(a) SENSE OF CONGRESS.—It is the sense of the Congress that experimental NASA sensors and missions that have the potential to benefit society if transitioned into operational monitoring systems be transitioned into operational status whenever possible.

(b) INTERAGENCY PROCESS.—The Director of OSTP, in consultation with the Administrator, the Administrator of NOAA, and other relevant stakeholders, shall develop a process to transition, when appropriate, NASA Earth science and space weather missions or sensors into operational status. The process shall include coordination of annual agency budget requests as required to execute the transitions.

(c) RESPONSIBLE AGENCY OFFICIAL.—The Administrator and the Administrator of NOAA shall each designate an agency official who shall have the responsibility for and authority to lead NASA's and NOAA's transition activities and interagency coordination.

(d) PLAN.—For each mission or sensor that is determined to be appropriate for transition under subsection (b), NASA and NOAA shall transmit to Congress a joint plan for conducting the transition. The plan shall include the strategy, milestones, and budget required to execute the transition. The transition plan shall be transmitted to Congress not later than 60 days after the successful completion of the mission or sensor critical design review.

SEC. 205. LANDSAT THERMAL INFRARED DATA CONTINUITY.

(a) PLAN.—In view of the importance of Landsat thermal infrared data for both scientific research and water management applications, the Administrator shall prepare a plan for ensuring the continuity of Landsat thermal infrared data or its equivalent, including allocation of costs and responsibility for the collection and distribution of the data, and a budget plan. As part of the plan, the Administrator shall provide an option for developing a thermal infrared sensor at minimum cost to be flown on the Landsat Data Continuity Mission with minimum delay to the schedule of the Landsat Data Continuity Mission.

(b) DEADLINE.—The plan shall be provided to Congress not later than 60 days after the date of enactment of this Act.

SEC. 206. REAUTHORIZATION OF GLORY MISSION.

(a) REAUTHORIZATION.—Congress reauthorizes NASA to continue with development of the Glory Mission, which will examine how aerosols and solar energy affect the Earth's climate.

(b) BASELINE REPORT.—Pursuant to the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155), not later than 90 days after the date of enactment of this Act, the Administrator shall transmit a new baseline report consistent with section 103(b)(2) of such Act. The report shall include an analysis of the factors contributing to cost growth and the steps taken to address them.

SEC. 207. PLAN FOR DISPOSITION OF DEEP SPACE CLIMATE OBSERVATORY.

(a) PLAN.—NASA shall develop a plan for the Deep Space Climate Observatory (DSCOVR), including such options as using the parts of the spacecraft in the development and assembly of other science missions, transferring the spacecraft to another agency, reconfiguring the spacecraft for another Earth science mission, establishing a public-private partnership for the mission, and entering into an international cooperative partnership to use the spacecraft for its primary or other purposes. The plan shall include an estimate of budgetary resources and schedules required to implement each of the options.

(b) CONSULTATION.—NASA shall consult, as necessary, with other Federal agencies, industry, academic institutions, and international space agencies in developing the plan.

(c) REPORT.—The Administrator shall transmit the plan required under subsection (a) to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 180 days after the date of enactment of this Act.

TITLE III—AERONAUTICS

SEC. 301. ENVIRONMENTALLY FRIENDLY AIRCRAFT RESEARCH AND DEVELOPMENT INITIATIVE.

The Administrator shall establish an initiative involving NASA, universities, industry, and other research organizations as appropriate, of research, development, and demonstration, in a relevant environment, of technologies to enable the following commercial aircraft performance characteristics:

(1) Noise levels on takeoff and on airport approach and landing that do not exceed ambient noise levels in the absence of flight operations in the vicinity of airports from which such commercial aircraft would normally operate, without increasing energy consumption or nitrogen oxide emissions compared to aircraft in commercial service as of the date of enactment of this Act.

(2) Significant reductions in greenhouse gas emissions compared to aircraft in commercial services as of the date of enactment of this Act.

SEC. 302. RESEARCH ALIGNMENT.

In addition to pursuing the research and development initiative described in section 301, the Administrator shall, to the maximum extent practicable within available funding, align the fundamental aeronautics research program to address high priority technology challenges of the National Academies' Decadal Survey of Civil Aeronautics, and shall work to increase the degree of involvement of external organizations, and especially of universities, in the fundamental aeronautics research program.

SEC. 303. RESEARCH PROGRAM TO DETERMINE PERCEIVED IMPACT OF SONIC BOOMS.

(a) IN GENERAL.—The ability to fly commercial aircraft over land at supersonic speeds without adverse impacts on the environment or on local communities would open new markets and enable new transportation capabilities. In order to have the basis for establishing an appropriate sonic boom standard for such flight operations, a research program is needed to assess the impact in a relevant environment of commercial supersonic flight operations.

(b) ESTABLISHMENT.—The Administrator shall establish a cooperative research program with industry, including the conduct of flight demonstrations in a relevant environment, to collect data on the perceived impact of sonic booms that would enable the promulgation of a standard that would have to be met for overland commercial supersonic flight operations.

SEC. 304. EXTERNAL REVIEW OF NASA'S AVIATION SAFETY-RELATED RESEARCH PROGRAMS.

(a) REVIEW.—The Administrator shall enter into an arrangement with the National Research Council for an independent review of NASA's aviation safety-related research programs. The review shall assess whether—

(1) the programs have well-defined, prioritized, and appropriate research objectives;

(2) the programs are properly coordinated with the safety research programs of the Federal Aviation Administration and other relevant Federal agencies;

(3) the programs have allocated appropriate resources to each of the research objectives; and

(4) suitable mechanisms exist for transitioning the research results from the programs into operational technologies and procedures and certification activities in a timely manner.

(b) REPORT.—Not later than 14 months after the date of enactment of this Act, the Administrator shall submit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the results of the review.

SEC. 305. INTERAGENCY RESEARCH INITIATIVE ON THE IMPACT OF AVIATION ON THE CLIMATE.

(a) IN GENERAL.—The Administrator, in coordination with the United States Climate Change Science Program and other appropriate agencies, shall establish a research initiative to assess the impact of aviation on the climate and, if warranted, to evaluate approaches to mitigate that impact.

(b) RESEARCH PLAN.—Not later than 1 year after the date of enactment of this Act, the participating Federal entities shall jointly develop a plan for the research initiative that contains objectives, proposed tasks, milestones, and a 5-year budgetary profile.

(c) REVIEW.—The Administrator shall enter into an arrangement with the National Research Council for conducting an independent review of the interagency research program plan, and shall provide the results of that review to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 2 years after the date of enactment of this Act.

SEC. 306. RESEARCH PROGRAM ON DESIGN FOR CERTIFICATION.

(a) PROGRAM.—Not later than 6 months after the date of enactment of this Act, NASA, in consultation with other appropriate agencies, shall establish a research program on methods to improve both confidence in and the timeliness of certification of new technologies for their introduction into the national airspace system.

(b) RESEARCH PLAN.—Not later than 1 year after the date of enactment of this Act, as part of the activity described in subsection (a), NASA shall develop a plan for the research program that contains objectives, proposed tasks, milestones, and a 5-year budgetary profile.

(c) REVIEW.—The Administrator shall enter into an arrangement with the National Research Council for conducting an independent review of the research program plan, and shall provide the results of that review to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 2 years after the date of enactment of this Act.

SEC. 307. AVIATION WEATHER RESEARCH.

The Administrator shall establish a program of collaborative research with NOAA on convective weather events, with the goal of significantly improving the reliability of 2-hour to 6-hour aviation weather forecasts.

SEC. 308. JOINT AERONAUTICS RESEARCH AND DEVELOPMENT ADVISORY COMMITTEE.

(a) ESTABLISHMENT.—A joint Aeronautics Research and Development Advisory Committee (in this section referred to as the ''Advisory Committee'') shall be established.

(b) DUTIES.—The Advisory Committee shall—

(1) make recommendations regarding the coordination of research and development activities of NASA and the Federal Aviation Administration;

(2) make recommendations for and monitor development and implementation of processes for

transitioning research and development from NASA and the Federal Aviation Administration to external entities for further development as appropriate;

(3) make recommendations regarding the status of the activities of NASA and the Federal Aviation Administration's research and development programs as they relate to the recommendations contained in the National Research Council's 2006 report entitled ''Decadal Survey of Civil Aeronautics'', and the recommendations contained in subsequent National Research Council reports of a similar nature; and

(4) not later than March 15 of each year, transmit a report to the Administrator, the Administrator of the Federal Aviation Administration, the Committee on Science and Technology of the House of Representatives, and the Committee on Commerce, Science, and Transportation of the Senate on the Advisory Committee's findings and recommendations under paragraphs (1), (2), and (3).

(c) MEMBERSHIP.—The Advisory Committee shall consist of 10 members, none of whom shall be a Federal employee, including—

(1) 5 members selected by the Administrator; and

(2) 5 members selected by the Chair of the Federal Aviation Administration's Research, Engineering, and Development Advisory Committee (REDAC).

(d) SELECTION PROCESS.—Initial selections under subsection (c) shall be made within 3 months after the date of enactment of this Act. Vacancies shall be filled in the same manner as provided in subsection (c).

(e) CHAIRPERSON.—The Advisory Committee shall select a chairperson from among its members.

(f) COORDINATION.—The Advisory Committee shall coordinate with the advisory bodies of other Federal agencies, which may engage in related research activities.

(g) COMPENSATION.—The members of the Advisory Committee shall serve without compensation, but shall receive travel expenses, including per diem in lieu of subsistence, in accordance with sections 5702 and 5703 of title 5, United States Code.

(h) MEETINGS.—The Advisory Committee shall convene, in person or by electronic means, at least 4 times per year.

(i) QUORUM.—A majority of the members serving on the Advisory Committee shall constitute a quorum for purposes of conducting the business of the Advisory Committee.

(j) DURATION.—Section 14 of the Federal Advisory Committee Act shall not apply to the Advisory Committee.

SEC. 309. FUNDING FOR RESEARCH AND DEVELOPMENT ACTIVITIES IN SUPPORT OF OTHER MISSION DIRECTORATES.

Research and development activities performed by the Aeronautics Research Mission Directorate with the primary objective of assisting in the development of a flight project in another Mission Directorate shall be funded by the Mission Directorate seeking assistance.

SEC. 310. UNIVERSITY-BASED CENTERS FOR RESEARCH ON AVIATION TRAINING.

Section 427(a) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155) is amended by striking ''may'' and inserting ''shall''.

TITLE IV—INTERNATIONAL EXPLORATION INITIATIVE

SEC. 401. SENSE OF CONGRESS.

It is the sense of Congress that the President of the United States should invite America's friends and allies to participate in a long-term international initiative under the leadership of the United States to expand human and robotic presence into the solar system, including the exploration and utilization of the Moon, near Earth asteroids, Lagrangian points, and eventually Mars and its moons, among other exploration and utilization goals.

SEC. 402. STEPPING STONE APPROACH TO EXPLORATION.

In order to maximize the cost-effectiveness of the long-term exploration and utilization activities of the United States, the Administrator shall take all necessary steps to ensure that activities in its lunar exploration program shall be designed and implemented in a manner that gives strong consideration to how those activities might also help meet the requirements of future exploration and utilization activities beyond the Moon. The timetable of the lunar phase of the long-term international exploration initiative shall be determined by the availability of funding and agreement on an international cooperative framework for the conduct of the international exploration initiative. However, once an exploration-related project enters its development phase, the Administrator shall seek, to the maximum extent practicable, to complete that project without undue delays.

SEC. 403. LUNAR OUTPOST.

(a) ESTABLISHMENT.—As NASA works toward the establishment of a lunar outpost, NASA shall make no plans that would require a lunar outpost to be occupied to maintain its viability. Any such outpost shall be operable as a human-tended facility capable of remote or autonomous operation for extended periods.

(b) DESIGNATION.—The United States portion of the first human-tended outpost established on the surface of the Moon shall be designated the ''Neil A. Armstrong Lunar Outpost''.

(c) CONGRESSIONAL INTENT.—It is the intent of Congress that NASA shall make use of commercial services to the maximum extent practicable in support of its lunar outpost activities.

SEC. 404. EXPLORATION TECHNOLOGY DEVELOPMENT.

(a) IN GENERAL.—A robust program of long-term exploration-related technology research and development will be essential for the success and sustainability of any enduring initiative of human and robotic exploration of the solar system.

(b) ESTABLISHMENT.—The Administrator shall establish and maintain a program of long-term exploration-related technology research and development that is not tied to specific flight projects and that has a funding goal of at least 10 percent of the total budget of the Exploration Systems Mission Directorate.

(c) GOALS.—The long-term technology program shall have the goal of having at least 50 percent of the funding allocated to external grants and contracts with universities, research institutions, and industry.

SEC. 405. EXPLORATION RISK MITIGATION PLAN.

(a) PLAN.—The Administrator shall prepare a plan that identifies and prioritizes the human and technical risks that will need to be addressed in carrying out human exploration beyond low Earth orbit and the research and development activities required to address those risks. The plan shall address the role of the International Space Station in exploration risk mitigation and include a detailed description of the specific steps being taken to utilize the International Space Station for that purpose.

(b) REPORT.—The Administrator shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate the plan described in subsection (a) not later than one year after the date of enactment of this Act.

SEC. 406. EXPLORATION CREW RESCUE.

In order to maximize the ability to rescue astronauts whose space vehicles have become disabled, the Administrator shall enter into discussions with the appropriate representatives of spacefaring nations who have or plan to have crew transportation systems capable of orbital flight or flight beyond low Earth orbit for the purpose of agreeing on a common docking system standard.

SEC. 407. PARTICIPATORY EXPLORATION.

(a) IN GENERAL.—The Administrator shall develop a technology plan to enable dissemination of information to the public to allow the public to experience missions to the Moon, Mars, or other bodies within our solar system by leveraging advanced exploration technologies. The plan shall identify opportunities to leverage technologies in NASA's Constellation systems that deliver a rich, multi-media experience to the public, and that facilitate participation by the public, the private sector, nongovernmental organizations, and international partners. Technologies for collecting high-definition video, 3-dimensional images, and scientific data, along with the means to rapidly deliver this content through extended high bandwidth communications networks shall be considered as part of this plan. It shall include a review of high bandwidth radio and laser communications, high-definition video, stereo imagery, 3-dimensional scene cameras, and Internet routers in space, from orbit, and on the lunar surface. The plan shall also consider secondary cargo capability for technology validation and science mission opportunities. In addition, the plan shall identify opportunities to develop and demonstrate these technologies on the International Space Station and robotic missions to the Moon, Mars, and other solar system bodies.

(b) REPORT.—Not later than 270 days after the date of enactment of this Act, the Administrator shall submit the plan to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

SEC. 408. SCIENCE AND EXPLORATION.

It is the sense of Congress that NASA's scientific and human exploration activities are synergistic, i.e. science enables exploration and human exploration enables science. The Congress encourages the Administrator to coordinate, where practical, NASA's science and exploration activities with the goal of maximizing the success of human exploration initiatives and furthering our understanding of the Universe that we explore.

TITLE V—SPACE SCIENCE

SEC. 501. TECHNOLOGY DEVELOPMENT.

The Administrator shall establish a cross-Directorate long-term technology development program for space and Earth science within the Science Mission Directorate for the development of new technology. The program shall be independent of the flight projects under development. NASA shall have a goal of funding the cross-Directorate technology development program at a level of 5 percent of the total Science Mission Directorate annual budget. The program shall be structured to include competitively awarded grants and contracts.

SEC. 502. PROVISION FOR FUTURE SERVICING OF OBSERVATORY-CLASS SCIENTIFIC SPACECRAFT.

The Administrator shall take all necessary steps to ensure that provision is made in the design and construction of all future observatory-class scientific spacecraft intended to be deployed in Earth orbit or at a Lagrangian point in space for robotic or human servicing and repair.

SEC. 503. MARS EXPLORATION.

Congress reaffirms its support for a systematic, integrated program of exploration of the Martian surface to examine the planet whose surface is most like Earth's, to search for evidence of past or present life, and to examine Mars for future habitability and as a long-term goal for future human exploration. To the extent affordable and practical, the program should pursue the goal of launches at every Mars launch opportunity, leading to an eventual robotic sample return.

SEC. 504. IMPORTANCE OF A BALANCED SCIENCE PROGRAM.

It is the sense of Congress that a balanced and adequately funded set of activities, consisting of NASA's research and analysis grants

programs, technology development, small, medium-sized, and large space science missions, and suborbital research activities, contributes to a robust and productive science program and serves as a catalyst for innovation. It is further the sense of Congress that suborbital flight activities, including the use of sounding rockets, aircraft, and high-altitude balloons, offer valuable opportunities to advance science, train the next generation of scientists and engineers, and provide opportunities for participants in the programs to acquire skills in systems engineering and systems integration that are critical to maintaining the Nation's leadership in space programs. The Congress believes that it is in the national interest to expand the size of NASA's suborbital research program.

SEC. 505. RESTORATION OF RADIOISOTOPE THERMOELECTRIC GENERATOR MATERIAL PRODUCTION.

(a) PLAN.—The Director of OSTP shall develop a plan for restarting and sustaining the domestic production of radioisotope thermoelectric generator material for deep space and other space science missions.

(b) REPORT.—The plan developed under subsection (a) shall be transmitted to Congress not later than 270 days after the date of enactment of this Act.

SEC. 506. ASSESSMENT OF IMPEDIMENTS TO INTERAGENCY COOPERATION ON SPACE AND EARTH SCIENCE MISSIONS.

(a) ASSESSMENT.—The Administrator shall enter into an arrangement with the National Academies to assess impediments to the successful conduct of interagency cooperation on space and Earth science missions, to provide lessons learned and best practices, and to recommend steps to help facilitate successful interagency collaborations on space and Earth science missions.

(b) REPORT.—The report of the assessment carried out under subsection (a) shall be transmitted to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 15 months after the date of enactment of this Act.

SEC. 507. ASSESSMENT OF COST GROWTH.

(a) STUDY.—The Administrator shall enter into an arrangement for an independent external assessment to identify the primary causes of cost growth in the large, medium-sized, and small space and Earth science spacecraft mission classes, and make recommendations as to what changes, if any, should be made to contain costs and ensure frequent mission opportunities in NASA's science spacecraft mission programs.

(b) REPORT.—The report of the assessment conducted under subsection (a) shall be submitted to Congress not later than 15 months after the date of enactment of this Act.

SEC. 508. OUTER PLANETS EXPLORATION.

It is the sense of Congress that the outer solar system planets and their satellites can offer important knowledge about the formation and evolution of the solar system, the nature and diversity of these solar system bodies, and the potential for conditions conducive to life beyond Earth. NASA should move forward with plans for an Outer Planets flagship mission to the Europa-Jupiter system or the Titan-Saturn system as soon as practicable within a balanced Planetary Science program.

TITLE VI—SPACE OPERATIONS

Subtitle A—International Space Station

SEC. 601. UTILIZATION.

The Administrator shall take all necessary steps to ensure that the International Space Station remains a viable and productive facility capable of potential United States utilization through at least 2020 and shall take no steps that would preclude its continued operation and utilization by the United States after 2016.

SEC. 602. RESEARCH MANAGEMENT PLAN.

(a) RESEARCH MANAGEMENT PLAN.—The Administrator shall develop a research management plan for the International Space Station. The plan shall include a process for selecting and prioritizing research activities (including fundamental, applied, commercial, and other research) for flight on the International Space Station. This plan shall be used to prioritize resources such as crew time, racks and equipment, and United States access to international research facilities and equipment. The plan shall also identify the organization to be responsible for managing United States research on the International Space Station, including a description of the relationship of the management institution with NASA (e.g., internal NASA office, contract, cooperative agreement, or grant), the estimated length of time for the arrangement, and the budget required to support the management institution. The plan shall be developed in consultation with other Federal agencies, academia, industry, and other relevant stakeholders. The plan shall be transmitted to Congress not later than 12 months after the date of enactment of this Act.

(b) ACCESS TO NATIONAL LABORATORY.—The Administrator shall—

(1) establish a process by which to support International Space Station National Laboratory users in identifying their requirements for transportation of research supplies to and from the International Space Station, and for communicating those requirements to NASA and International Space Station transportation services providers; and

(2) develop an estimate of the transportation requirements needed to support users of the International Space Station National Laboratory and develop a plan for satisfying those requirements by dedicating a portion of volume on NASA supply missions to the International Space Station and missions returning from the International Space Station to Earth.

(c) ASSESSMENT.—The Administrator shall—

(1) identify existing research equipment and racks and support equipment that are manifested for flight;

(2) provide a detailed description of the status of research equipment and facilities that were completed or in development prior to being cancelled, and provide the budget and milestones for completing and preparing the equipment for flight on the International Space Station; and

(3) provide the results of the assessment to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 18 months after the date of enactment of this Act.

(d) ADVISORY COMMITTEE.—Not later than 1 year after the date of enactment of this Act, the Administrator shall establish an advisory panel under the Federal Advisory Committee Act to monitor the activities and management of the International Space Station National Laboratory.

SEC. 603. CONTINGENCY PLAN FOR CARGO RESUPPLY.

(a) IN GENERAL.—The International Space Station represents a significant investment of national resources, and it is a facility that embodies a cooperative international approach to the exploration and utilization of space. As such, it is important that its continued viability and productivity be ensured, to the maximum extent possible, after the Space Shuttle is retired.

(b) CONTINGENCY PLAN.—The Administrator shall develop a contingency plan and arrangements, including use of International Space Station international partner cargo resupply capabilities, to ensure the continued viability and productivity of the International Space Station in the event that United States commercial cargo resupply services are not available during any extended period after the date that the Space Shuttle is retired. The plan shall be delivered to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than one year after the date of enactment of this Act.

Subtitle B—Space Shuttle

SEC. 611. FLIGHT MANIFEST.

(a) BASELINE MANIFEST.—In addition to the Space Shuttle flights listed as part of the baseline flight manifest as of January 1, 2008, the Utilization flights ULF–4 and ULF–5 shall be considered part of the Space Shuttle baseline flight manifest and shall be flown prior to the retirement of the Space Shuttle.

(b) ADDITIONAL FLIGHT TO DELIVER THE ALPHA MAGNETIC SPECTROMETER TO THE INTERNATIONAL SPACE STATION.—In addition to the flying of the baseline manifest as described in subsection (a), the Administrator shall take all necessary steps to fly one additional Space Shuttle flight to deliver the Alpha Magnetic Spectrometer to the International Space Station prior to the retirement of the Space Shuttle.

(c) SPACE SHUTTLE RETIREMENT DATE.—The Space Shuttle shall be retired following the completion of the baseline flight manifest and the flight of the additional flight specified in subsection (b), events that are anticipated to occur in 2010.

SEC. 612. DISPOSITION OF SHUTTLE-RELATED ASSETS.

Not later than 90 days after the date of enactment of this Act, the Administrator shall provide a plan to Congress for the disposition of the remaining Space Shuttle orbiters and other Space Shuttle program-related hardware and facilities after the retirement of the Space Shuttle fleet. The plan shall include a process by which educational institutions and science museums and other appropriate organizations may acquire, through loan or disposal by the Federal Government, Space Shuttle program-related hardware. The Administrator shall not dispose of any Space Shuttle-related hardware prior to the completion of the plan.

SEC. 613. SPACE SHUTTLE TRANSITION LIAISON OFFICE.

(a) ESTABLISHMENT.—The Administrator shall establish an office within NASA's Office of Human Capital Management that shall assist local communities affected by the termination of the Space Shuttle program. The office shall offer technical assistance and serve as a clearinghouse to assist communities in identifying services available from other Federal agencies.

(b) SUNSET.—The Office established under subsection (a) shall cease operations 24 months after the last Space Shuttle flight.

Subtitle C—Launch Services

SEC. 621. LAUNCH SERVICES STRATEGY.

(a) IN GENERAL.—In preparation for the award of contracts to follow up on the current NASA Launch Services (NLS) contracts, the Administrator shall develop a strategy for providing domestic commercial launch services in support of NASA's small and medium-sized Science, Space Operations, and Exploration missions, consistent with current law and policy.

(b) REPORT.—The Administrator shall transmit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the strategy developed under subsection (a) not later than 90 days after the date of enactment of this Act. The report shall provide, at a minimum—

(1) the results of the Request for Information on small to medium-sized launch services released on April 22, 2008;

(2) an analysis of possible alternatives to maintain small and medium-sized lift capabilities after June 30, 2010, including the use of the Department of Defense's Evolved Expendable Launch Vehicle (EELV);

(3) the recommended alternatives, and associated 5-year budget plans starting in October 2010 that would enable their implementation; and

(4) a contingency plan in the event the recommended alternatives described in paragraph (3) are not available when needed.

TITLE VII—EDUCATION

SEC. 701. RESPONSE TO REVIEW.

(a) PLAN.—The Administrator shall prepare a plan identifying actions taken or planned in response to the recommendations of the National Academies report, ''NASA's Elementary and Secondary Education Program: Review and Critique''. For those actions that have not been implemented, the plan shall include a schedule and budget required to support the actions.

(b) REPORT.—The plan prepared under subsection (a) shall be transmitted to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 1 year after the date of enactment of this Act.

SEC. 702. EXTERNAL REVIEW OF EXPLORER SCHOOLS PROGRAM.

(a) REVIEW.—The Administrator shall make arrangements for an independent external review of the Explorer Schools program to evaluate its goals, status, plans, and accomplishments.

(b) REPORT.—The report of the independent external review shall be transmitted to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 1 year after the date of enactment of this Act.

TITLE VIII—NEAR-EARTH OBJECTS

SEC. 801. IN GENERAL.

The Congress reaffirms the policy direction established in the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155) for NASA to detect, track, catalogue, and characterize the physical characteristics of near-Earth objects equal to or greater than 140 meters in diameter. NASA's Near-Earth Object program activities will also provide benefits to NASA's scientific and exploration activities.

SEC. 802. FINDINGS.

Congress makes the following findings:

(1) Near-Earth objects pose a serious and credible threat to humankind, as many scientists believe that a major asteroid or comet was responsible for the mass extinction of the majority of the Earth's species, including the dinosaurs, nearly 65,000,000 years ago.

(2) Several such near-Earth objects have only been discovered within days of the objects' closest approach to Earth and recent discoveries of such large objects indicate that many large near-Earth objects remain undiscovered.

(3) Asteroid and comet collisions rank as one of the most costly natural disasters that can occur.

(4) The time needed to eliminate or mitigate the threat of a collision of a potentially hazardous near-Earth object with Earth is measured in decades.

(5) Unlike earthquakes and hurricanes, asteroids and comets can provide adequate collision information, enabling the United States to include both asteroid-collision and comet-collision disaster recovery and disaster avoidance in its public-safety structure.

(6) Basic information is needed for technical and policy decisionmaking for the United States to create a comprehensive program in order to be ready to eliminate and mitigate the serious and credible threats to humankind posed by potentially hazardous near-Earth asteroids and comets.

(7) As a first step to eliminate and to mitigate the risk of such collisions, situation and decision analysis processes, as well as procedures and system resources, must be in place well before a collision threat becomes known.

SEC. 803. REQUESTS FOR INFORMATION.

The Administrator shall issue requests for information on—

(1) a low-cost space mission with the purpose of rendezvousing with, attaching a tracking device, and characterizing the Apophis asteroid, which scientists estimate will in 2029 pass at a distance from Earth that is closer than geostationary satellites; and

(2) a medium-sized space mission with the purpose of detecting near-Earth objects equal to or greater than 140 meters in diameter.

SEC. 804. ESTABLISHMENT OF POLICY.

Not later than 2 years after the date of enactment of this Act, the Director of OSTP shall—

(1) develop a policy for notifying Federal agencies and relevant emergency response institutions of an impending near-Earth object threat, if near term public safety is at stake; and

(2) recommend a Federal agency or agencies to be responsible for protecting the Nation from a near-Earth object that is anticipated to collide with Earth and implementing a deflection campaign, in consultation with international bodies, should one be required.

SEC. 805. PLANETARY RADAR CAPABILITY.

The Administrator shall maintain a planetary radar that is, at minimum, comparable to the capability provided through the NASA Deep Space Network Goldstone facility.

SEC. 806. ARECIBO OBSERVATORY.

Congress reiterates its support for the use of the Arecibo Observatory for NASA-funded near-Earth object-related activities. The Administrator shall ensure the availability of the Arecibo Observatory's planetary radar to support these activities until the National Academies' review of NASA's approach for the survey and deflection of near-Earth objects, including a determination of the role of Arecibo, that was directed to be undertaken by the Fiscal Year 2008 Omnibus Appropriations Act, is completed.

TITLE IX—COMMERCIAL INITIATIVES

SEC. 901. SENSE OF CONGRESS.

It is the sense of Congress that a healthy and robust commercial sector can make significant contributions to the successful conduct of NASA's space exploration program. While some activities are inherently governmental in nature, there are many other activities, such as routine supply of water, fuel, and other consumables to low Earth orbit or to destinations beyond low Earth orbit, and provision of power or communications services to lunar outposts, that potentially could be carried out effectively and efficiently by the commercial sector at some point in the future. Congress encourages NASA to look for such service opportunities and, to the maximum extent practicable, make use of the commercial sector to provide those services.

SEC. 902. COMMERCIAL CREW INITIATIVE.

(a) IN GENERAL.—In order to stimulate commercial use of space, help maximize the utility and productivity of the International Space Station, and enable a commercial means of providing crew transfer and crew rescue services for the International Space Station, NASA shall—

(1) make use of United States commercially provided International Space Station crew transfer and crew rescue services to the maximum extent practicable, if those commercial services have demonstrated the capability to meet NASA-specified ascent, entry, and International Space Station proximity operations safety requirements;

(2) limit, to the maximum extent practicable, the use of the Crew Exploration Vehicle to missions carrying astronauts beyond low Earth orbit once commercial crew transfer and crew rescue services that meet safety requirements become operational;

(3) facilitate, to the maximum extent practicable, the transfer of NASA-developed technologies to potential United States commercial crew transfer and rescue service providers, consistent with United States law; and

(4) issue a notice of intent, not later than 180 days after the date of enactment of this Act, to enter into a funded, competitively awarded Space Act Agreement with two or more commercial entities for a Phase 1 Commercial Orbital Transportation Services (COTS) crewed vehicle demonstration program.

(b) COTS CREWED VEHICLE DEMONSTRATION PROGRAM AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to NASA for the program described in subsection (a)(4) $50,000,000 for fiscal year 2009, to remain available until expended.

(c) CONGRESSIONAL INTENT.—It is the intent of Congress that funding for the program described in subsection (a)(4) shall not come at the expense of full funding of the amounts authorized under section 101(a)(3), and for future fiscal years, for Orion Crew Exploration Vehicle development, Ares I Crew Launch Vehicle development, or International Space Station cargo delivery.

(d) ADDITIONAL TECHNOLOGIES AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to NASA for the provision of International Space Station-compatible docking adaptors and other relevant technologies to be made available to the commercial crew providers selected to service the International Space Station $50,000,000, to remain available until expended.

(e) CREW TRANSFER AND CREW RESCUE SERVICES CONTRACT.—If a commercial provider demonstrates the capability to provide International Space Station crew transfer and crew rescue services and to satisfy NASA ascent, entry, and International Space Station proximity operations safety requirements, NASA shall enter into an International Space Station crew transfer and crew rescue services contract with that commercial provider for a portion of NASA's anticipated International Space Station crew transfer and crew rescue requirements from the time the commercial provider commences operations under contract with NASA through calendar year 2016, with an option to extend the period of performance through calendar year 2020.

TITLE X—REVITALIZATION OF NASA INSTITUTIONAL CAPABILITIES

SEC. 1001. REVIEW OF INFORMATION SECURITY CONTROLS.

(a) REPORT ON CONTROLS.—Not later than one year after the date of enactment of this Act, the Comptroller General shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a review of information security controls that protect NASA's information technology resources and information from inadvertent or deliberate misuse, fraudulent use, disclosure, modification, or destruction. The review shall focus on networks servicing NASA's mission directorates. In assessing these controls, the review shall evaluate—

(1) the network's ability to limit, detect, and monitor access to resources and information, thereby safeguarding and protecting them from unauthorized access;

(2) the physical access to network resources; and

(3) the extent to which sensitive research and mission data is encrypted.

(b) RESTRICTED REPORT ON INTRUSIONS.—Not later than one year after the date of enactment of this Act, and in conjunction with the report described in subsection (a), the Comptroller General shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a restricted report detailing results of vulnerability assessments conducted by the Government Accountability Office on NASA's network resources. Intrusion attempts during such vulnerability assessments shall be divulged to NASA senior

management prior to their application. The report shall put vulnerability assessment results in the context of unauthorized accesses or attempts during the prior two years and the corrective actions, recent or ongoing, that NASA has implemented in conjunction with other Federal authorities to prevent such intrusions.

SEC. 1002. MAINTENANCE AND UPGRADE OF CENTER FACILITIES.

(a) IN GENERAL.—In order to sustain healthy Centers that are capable of carrying out NASA's missions, the Administrator shall ensure that adequate maintenance and upgrading of those Center facilities is performed on a regular basis.

(b) REVIEW.—The Administrator shall determine and prioritize the maintenance and upgrade backlog at each of NASA's Centers and associated facilities, and shall develop a strategy and budget plan to reduce that maintenance and upgrade backlog by 50 percent over the next five years.

(c) REPORT.—The Administrator shall deliver a report to Congress on the results of the activities undertaken in subsection (b) concurrently with the delivery of the fiscal year 2011 budget request.

SEC. 1003. ASSESSMENT OF NASA LABORATORY CAPABILITIES.

(a) IN GENERAL.—NASA's laboratories are a critical component of NASA's research capabilities, and the Administrator shall ensure that those laboratories remain productive.

(b) REVIEW.—The Administrator shall enter into an arrangement for an independent external review of NASA's laboratories, including laboratory equipment, facilities, and support services, to determine whether they are equipped and maintained at a level adequate to support NASA's research activities. The assessment shall also include an assessment of the relative quality of NASA's in-house laboratory equipment and facilities compared to comparable laboratories elsewhere. The results of the review shall be provided to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 18 months after the date of enactment of this Act.

TITLE XI—OTHER PROVISIONS

SEC. 1101. SPACE WEATHER.

(a) PLAN FOR REPLACEMENT OF ADVANCED COMPOSITION EXPLORER AT L–1 LAGRANGIAN POINT.—

(1) PLAN.—The Director of OSTP shall develop a plan for sustaining space-based measurements of solar wind from the L–1 Lagrangian point in space and for the dissemination of the data for operational purposes. OSTP shall consult with NASA, NOAA, and other Federal agencies, and with industry, in developing the plan.

(2) REPORT.—The Director shall transmit the plan to Congress not later than 1 year after the date of enactment of this Act.

(b) RESEARCH PROGRAM ON SPACE WEATHER AND AVIATION.—

(1) ESTABLISHMENT.—The Administrator shall, in coordination with the National Science Foundation, NOAA, and other relevant agencies, initiate a research program to—

(A) conduct or supervise research projects on impacts of space weather to aviation, including impacts on communication, navigation, avionic systems, and airline passengers and personnel; and

(B) facilitate the transfer of technology from space weather research programs to Federal agencies with operational responsibilities and to the private sector.

(2) USE OF GRANTS OR COOPERATIVE AGREEMENTS.—The Administrator may use grants or cooperative agreements in carrying out this subsection.

(c) ASSESSMENT OF THE IMPACT OF SPACE WEATHER ON AVIATION.—

(1) STUDY.—The Administrator shall enter into an arrangement with the National Research Council for a study of the impacts of space weather on the current and future United States aviation industry, and in particular to examine the risks for Over-The-Pole (OTP) and Ultra-Long-Range (ULR) operations. The study shall—

(A) examine space weather impacts on at least communications, navigation, avionics, and human health in flight;

(B) assess the benefits of space weather information and services to reduce aviation costs and maintain safety;

(C) provide recommendations on how NASA, NOAA, and the National Science Foundation can most effectively carry out research and monitoring activities related to space weather and aviation; and

(D) provide recommendations on how to integrate space weather information into the Next Generation Air Transportation System.

(2) REPORT.—A report containing the results of the study shall be provided to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 1 year after the date of enactment of this Act.

SEC. 1102. SPACE TRAFFIC MANAGEMENT.

(a) IN GENERAL.—As more nations acquire the capabilities for launching payloads into outer space, there is an increasing need for a framework under which information intended to promote safe access into outer space, operations in outer space, and return from outer space to Earth free from physical or radio-frequency interference can be shared among those nations.

(b) DISCUSSIONS.—The Administrator, in consultation with other appropriate agencies of the Federal Government, shall initiate discussions with the appropriate representatives of other spacefaring nations with the goal of determining an appropriate framework under which information intended to promote safe access into outer space, operations in outer space, and return from outer space to Earth free from physical or radio-frequency interference can be shared among those nations.

SEC. 1103. STUDY OF EXPORT CONTROL POLICIES RELATED TO CIVIL AND COMMERCIAL SPACE ACTIVITIES.

(a) REVIEW.—The Director of OSTP shall carry out a study of the impact of current export control policies and implementation directives on the United States aerospace industry and its competitiveness in global markets, and on the ability of United States Government agencies to carry out cooperative activities in science and technology and human space flight, including the impact on research carried out under the sponsorship of those agencies.

(b) CONSULTATION.—In carrying out the study, the Director shall seek input from industry, academia, representatives of the science community, all affected United States Government agencies, and any other appropriate organizations and individuals.

(c) REPORT.—The Director shall provide a report detailing the findings and recommendations of the study to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 9 months after the date of enactment of this Act.

SEC. 1104. ASTRONAUT HEALTH CARE.

(a) SURVEY.—The Administrator shall administer an anonymous survey of astronauts and flight surgeons to evaluate communication, relationships, and the effectiveness of policies. The survey questions and the analysis of results shall be evaluated by experts independent of NASA. The survey shall be administered on at least a biennial basis.

(b) REPORT.—The Administrator shall transmit a report of the results of the survey to Congress not later than 90 days following completion of the survey.

SEC. 1105. NATIONAL ACADEMIES DECADAL SURVEYS.

(a) IN GENERAL.—The Administrator shall enter into agreements on a periodic basis with the National Academies for independent assessments, also known as decadal surveys, to take stock of the status and opportunities for Earth and space science discipline fields and Aeronautics research and to recommend priorities for research and programmatic areas over the next decade.

(b) INDEPENDENT COST ESTIMATES.—The agreements described in subsection(a) shall include independent estimates of the life cycle costs and technical readiness of missions assessed in the decadal surveys whenever possible.

(c) REEXAMINATION.—The Administrator shall request that each National Academies decadal survey committee identify any conditions or events, such as significant cost growth or scientific or technological advances, that would warrant NASA asking the National Academies to reexamine the priorities that the decadal survey had established.

SEC. 1106. INNOVATION PRIZES.

(a) IN GENERAL.—Prizes can play a useful role in encouraging innovation in the development of technologies and products that can assist NASA in its aeronautics and space activities, and the use of such prizes by NASA should be encouraged.

(b) AMENDMENTS.—Section 314 of the National Aeronautics and Space Act of 1958 is amended—

(1) by amending subsection (b) to read as follows:

''(b) TOPICS.—In selecting topics for prize competitions, the Administrator shall consult widely both within and outside the Federal Government, and may empanel advisory committees. The Administrator shall give consideration to prize goals such as the demonstration of the ability to provide energy to the lunar surface from space-based solar power systems, demonstration of innovative near-Earth object survey and deflection strategies, and innovative approaches to improving the safety and efficiency of aviation systems.''; and

(2) in subsection (i)(4) by striking ''$10,000,000'' and inserting ''$50,000,000''.

SEC. 1107. COMMERCIAL SPACE LAUNCH RANGE STUDY.

(a) STUDY BY INTERAGENCY COMMITTEE.—The Director of OSTP shall work with other appropriate Federal agencies to establish an interagency committee to conduct a study to—

(1) identify the issues and challenges associated with establishing a space launch range and facilities that are fully dedicated to commercial space missions in close proximity to Federal launch ranges or other Federal facilities; and

(2) develop a coordinating mechanism such that States seeking to establish such commercial space launch ranges will be able to effectively and efficiently interface with the Federal Government concerning issues related to the establishment of such commercial launch ranges in close proximity to Federal launch ranges or other Federal facilities.

(b) REPORT.—The Director shall, not later than May 31, 2010, submit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the results of the study conducted under subsection (a).

SEC. 1108. NASA OUTREACH AND TECHNOLOGY ASSISTANCE PROGRAM.

(a) ESTABLISHMENT.—NASA shall contract with an organization that has demonstrated the

ability to partner with NASA centers, aerospace contractors, and academic institutions to carry out a program to transfer the knowledge and technology of the space and aeronautics programs to small businesses in communities across the United States. The program shall support the mission of NASA's Innovative Partnerships Program to provide technical assistance through joint partnerships with industry, academia, government agencies, and national laboratories.

(b) PROGRAM STRUCTURE.—In carrying out the program described in subsection (a), the organization shall support the mission of NASA's Innovative Partnerships Program by undertaking the following activities:

(1) Facilitating technology transfer to the private sector to produce viable commercial products.

(2) Creating a network of academic institutions, aerospace contractors, and NASA centers that will commit to donating technical assistance to small businesses.

(3) Creating a network of economic development organizations to increase the awareness and enhance the effectiveness of the program nationwide.

(c) REPORT.—Not later than 1 year after the date of enactment of this Act, and annually thereafter, the Administrator shall submit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the efforts and accomplishments of the program established under subsection (a) in support of NASA's Innovative Partnerships Program. As part of the report, the Administrator shall provide—

(1) data on the number of small businesses receiving assistance, jobs created and retained, and volunteer hours donated by NASA, contractors, and academic institutions nationwide;

(2) an estimate of the total dollar value of the economic impact made by small businesses that received technical assistance through the program; and

(3) an accounting of the use of funds appropriated for the program.

(d) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to NASA for the program established under subsection (a), $4,000,000 for fiscal year 2009 from the funding available for the Innovative Partnerships Program, to remain available until expended.

The CHAIRMAN. No amendment to the committee amendment is in order except those printed in House Report 110–707. Each amendment may be offered only in the order printed in the report, by a Member designated in the report, shall be considered read, shall be debatable for the time specified in the report, equally divided and controlled by the proponent and an opponent of the amendment, shall not be subject to amendment, and shall not be subject to a demand for division of the question.

AMENDMENT NO. 1 OFFERED BY MR. GORDON OF TENNESSEE

The CHAIRMAN. It is now in order to consider amendment No. 1 printed in House Report 110–707.

Mr. GORDON of Tennessee. Madam Chairman, I yield myself such time as I may consume.

The CHAIRMAN. Does the gentleman offer an amendment?

Mr. GORDON of Tennessee. Yes, I do, Madam Chairman.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 1 offered by Mr. GORDON of Tennessee:

In section 303, add at the end the following new subsection:

(c) COORDINATION.—The Administrator shall ensure that sonic boom research is coordinated as appropriate with the Administrator of the Federal Aviation Administration, and as appropriate make use of the expertise of the Partnership for Air Transportation Noise and Emissions Reduction Center of Excellence sponsored by NASA and the Federal Aviation Administration.

Amend section 305 to read as follows:

SEC. 305. INTERAGENCY RESEARCH INITIATIVE ON THE IMPACT OF AVIATION ON THE CLIMATE.

(a) IN GENERAL.—The Administrator of the Federal Aviation Administration, in coordination with NASA and the United States Climate Change Science Program, shall establish a research initiative to assess the impact of aviation on the climate and, if warranted, to evaluate approaches to mitigate that impact.

(b) RESEARCH PLAN.—Not later than one year after the date of enactment of this Act, the participating Federal entities shall jointly develop a plan for the research program that contains the objectives, proposed tasks, milestones, and 5-year budgetary profile.

Amend section 306 to read as follows (and amend the table of contents accordingly):

SEC. 306. RESEARCH ON DESIGN FOR CERTIFICATION.

(a) ESTABLISHMENT OF PROGRAM.—Not later than 6 months after the date of enactment of this Act, the Federal Aviation Administration, in consultation with other agencies as appropriate, shall establish a research program on methods to improve both confidence in and the timeliness of certification of new technologies for their introduction into the national airspace system.

(b) RESEARCH PLAN.—Not later than 1 year after the date of enactment of this Act, as part of the activity described in subsection (a), the Federal Aviation Administration shall develop a plan for the research program that contains the objectives, proposed tasks, milestones, and five-year budgetary profile.

(c) REVIEW.—The Administrator of the Federal Aviation Administration shall have the National Research Council conduct an independent review of the research program plan and provide the results of that review to the Committee on Science and Technology and the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 18 months after the date of enactment of this Act.

In section 504, strike ''and high-altitude balloons,'' and insert ''high-altitude balloons, and suborbital reusable launch vehicles,''.

In title VII, add at the end the following new section (and amend the table of contents accordingly):

SEC. 703. SENSE OF CONGRESS.

It is the sense of Congress that NASA's educational programs are important sources of inspiration and hands-on learning for the next generation of engineers and scientists and should be supported. In that regard, programs such as EarthKAM, which brings NASA directly into American classrooms by enabling students to talk directly with Astronauts aboard International Space Station and take photographs of Earth from space, and NASA involvement in robotics competitions for students of all levels, are particularly worthy undertakings and NASA should support them and look for additional opportunities to engage students through NASA's space and aeronautics activities.

In section 901, insert ''It is further the sense of Congress that United States entrepreneurial space companies have the potential to develop and deliver innovative technology solutions at affordable costs. NASA is encouraged to use United States entrepreneurial space companies to conduct appropriate research and development activities. NASA is further encouraged to seek ways to ensure that firms that rely on fixed-price proposals are not disadvantaged when NASA seeks to procure technology development.'' after ''provide those services.''.

In title XI, add at the end the following new sections (and amend the table of contents accordingly):

SEC. 1109. REDUCTION-IN-FORCE MORATORIUM.

NASA shall not initiate or implement a reduction-in-force, or conduct any other involuntary separations of permanent, non-Senior Executive Service, civil servant employees except for cause on charges of misconduct, delinquency, or inefficiency prior to December 31, 2010.

SEC. 1110. LIMIT ON THE USE OF TERM POSITIONS.

NASA shall limit the percentage of employees in term positions, excluding students and cooperatives, within NASA to less than or equal to ten percent of the total number of non-Senior Executive Service, civil servant employees in fiscal year 2009.

SEC. 1111. TEMPORARY CONTINUATION OF COVERAGE OF HEALTH BENEFITS.

(a) Section 8905a (d) of title 5, United States Code, is amended by adding at the end the following new paragraph:

''(6)(A) If the basis for continued coverage under this section is, as a result of the termination of the Space Shuttle Program, an involuntary separation from a position due to a reduction-in-force or declination of a directed reassignment or transfer of function, or a voluntary separation from a surplus position in the National Aeronautics and Space Administration—

''(i) the individual shall be liable for not more than the employee contributions referred to in paragraph (1)(A)(i); and

''(ii) the National Aeronautics and Space Administration shall pay the remaining portion of the amount required under paragraph (1) (A).

''(B) This paragraph shall only apply with respect to individuals whose continued coverage is based on a separation occurring on or after the date of enactment of this paragraph and before December 31, 2010.

''(C) For purposes of this paragraph, ''surplus position'' means a position which is—

''(i) identified in pre-reduction-in-force planning as no longer required, and which is expected to be eliminated under formal reduction-in-force procedures as a result of the termination of the Space Shuttle Program; or

''(ii) encumbered by an employee who has received official certification from the National Aeronautics and Space Administration consistent with the Administration's career transition assistance program regulations that the position is being abolished as a result of the termination of the Space Shuttle Program.''.

(b) Paragraph (1)(A) of such subsection (d) is amended by striking ''(4) and (5)'' and inserting ''(4), (5), and (6)''.

The CHAIRMAN. Pursuant to House Resolution 1257, the gentleman from Tennessee (Mr. GORDON) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Tennessee.

Mr. GORDON of Tennessee. Madam Chairman, I yield myself such time as I may consume.

Madam Chairman this is a bipartisan manager's amendment that has been developed in close collaboration with the Science and Technology Committee minority leadership.

It provides several aeronautics-related provisions in the bill to conform them to provisions that were included in last year's House-passed FAA reauthorization bill.

It also includes a provision in section 303 related to coordination with the FAA on sonic boom research, which will help ensure that NASA's research results can help inform any future FAA rulemaking.

The amendment also encourages the potential scientific utility of emerging commercial, reusable launch vehicles by citing them as potential options for suborbital scientific research once they become available.

The amendment also includes language provisions by Mr. LAMPSON on the value of NASA's EarthKAM and robotics competitions for aspiring students.

Both of these activities were great ways to inspire students to learn about math, science and technology by providing exciting learning experiences. And I want to commend Mr. LAMPSON for his initiative in this area.

The amendment also expands section 901 to include a sense of Congress urging NASA's use of entrepreneurial companies to conduct corporate R&D.

Innovative ideas and products have repeatedly come out of these small entrepreneurial companies, and this amendment encourages NASA to seek ways to ensure such firms are not disadvantaged when the agency seeks to procure technology development.

Finally, the manager's amendment includes several important NASA workforce-related provisions, including an extension of the RIF moratorium, a limit on the use of certain positions in fiscal year 2009, and temporary continuation of health care benefits.

We have worked with NASA, the IFPTE union, and Chairman DAVIS' subcommittee on Federal Workforce to come up with a reasonable set of provisions.

The workforce provisions included in the manager's amendment are acceptable to all parties, and I believe they will help strengthen and protect the NASA workforce.

In sum, I believe the manager's amendment will make a good deal even better. And I urge Members to support it.

I reserve the balance of my time.

The CHAIRMAN. The Chair now recognizes Mr. HALL from Texas.

Mr. HALL of Texas. Madam Chairman, I rise to claim the time, and I am going to encourage my colleagues to support this amendment. But first I want to yield 3 minutes to Mr. FEENEY, the gentleman from Florida.

Mr. FEENEY. I thank Ranking Member HALL, and I thank Chairman GORDON for this amendment. I did want to take a moment or two to point out a very important aspect of this manager's amendment. It directs the White House Office of Science and Technology to establish an interagency committee to study issues related to locating a commercial space launch range in close proximity to a Federal launch range.

In order to have viable commercial launch operations in the United States, effective coordination and cooperation must exist between potential commercial ranges and existing Federal ranges. Federal agencies have to endeavor to assist and not choke off commercial space ranges. The interagency committee will focus on these agencies and the importance of this issue.

Let me say that for the last 50 years, space has been really a bipolar world. Either you were a part of the former Soviet orbit and space power, or you were part of the American-led free nations in space power.

Today it is a very different world. I just recently came back from the first ever global space summit in Beijing, China, where over 15 nations were represented, some six or seven major spacefaring powers. It is not just people that have to come ask the United States to get permission to get commercial opportunities in space today. There are some 50 different international agreements, many of which don't even involve the United States of America.

In some ways, our competitors are beating us to the punch in commercial launch opportunities. It is not just bad for business. Let me say, for example, the Chinese have launched over 33 satellites from other countries. They are doing this to help countries we would consider troublesome, for example, Venezuela or Nigeria. They are also using it to buy influence with our friends, like Japan or Brazil. America cannot shoot itself in the foot in developing and maintaining our historic leadership in commercial opportunities any more than we can give up predominance in the civilian side of human space exploration.

And so this manager's amendment contains a very important aspect. I sincerely applaud the chairman and others, including John Culberson, for advocating for this specific piece of the manager's amendment.

Mr. GORDON of Tennessee. I yield 1 minute to the gentleman from Colorado, the chairman of the subcommittee.

Mr. UDALL of Colorado. I thank the gentleman for yielding.

I rise in support of the manager's amendment. We have all worked together to fashion a constructive amendment. And I believe it includes a number of useful provisions that enhance the bill. Chairman GORDON already described them. So I am not going to restate them. But I want to note in particular that the workforce provisions included in the amendment have been under consideration for some time. We wanted to make sure however that we had the concurrence of all the stakeholders before we added any of these provisions. That has been done. The provisions will strengthen and protect the NASA workforce. I would ask the Members to support this amendment. It is a good amendment. It deserves the support of the body.

Mr. FEENEY. I am claiming time, without objection, for the minority side. We have no further speakers and would urge support and adoption of the manager's amendment.

I yield back the balance of my time.

Mr. GORDON of Tennessee. Madam Chairman, I yield the remainder of my time to my friend from Ohio (Mr. KUCINICH).

The CHAIRMAN. The gentleman from Ohio is recognized for 1 minute.

Mr. KUCINICH. Madam Chairman, I rise in strong support of the manager's amendment and the underlying bill that reauthorizes the National Aeronautics and Space Administration. I want to thank the chairman of the Federal Workforce Subcommittee for working with me on three critical provisions that are included in this amendment. I also want to thank the chairman of the Science and Technology Committee and the Space and Aeronautics Subcommittee for putting together yet another bill that protects NASA and for working with me on this amendment.

The most important provision in this amendment is an extension of the ban on layoffs until at least 2011. Since announcing the ambitious vision for space exploration, the administration underfunded NASA. But Congress has consistently, and I might point out, in a bipartisan way, rejected these destructive cuts and layoffs. I am particularly proud of the way our own Ohio delegation has worked together on this.

Layoffs undermine not only workers' lives and the mission of the agency but also the regional economy. According to the researchers at Cleveland State University, NASA Glenn in Brook Park generated a demand for products and services of $955 million and was responsible for over 6,000 jobs in northeast Ohio in 2006.

Over the last few years, NASA has hired nearly three-quarters of its new science and engineering employees as short-term employees, thereby denying them full Civil Service protections. The 10 percent cap on short-term positions in this amendment will help NASA compete for the best and brightest in the field.

The third provision would temporarily extend health care benefits for employees in transition. The sudden loss of health care coverage is a major factor currently discouraging employees from taking a buy-out. The provision would be helpful in fostering a respectful workforce transition plan during this time of change for NASA.

This amendment and the underlying bill keep NASA healthy by supporting its employees. All across this country,

from one end of the country to the other, there are NASA employees who are performing a valuable service, who are helping us to create the jobs of the future and enabling America to fulfill its vision to keep reaching.

Mr. OBERSTAR. Madam Chairman, I rise in support of the Manager's Amendment to the National Aeronautics and Space Administration Authorization Act of 2008 (NASA Reauthorization), offered by the gentleman from Tennessee, Representative BART GORDON, Chairman of the Committee on Science and Technology. I commend Chairman GORDON for his work on this important bill, which provides approximately $20 billion in funding authorization for fiscal year 2009, including approximately $853 million for aeronautical research, which is vital to commercial aviation.

The Manager's Amendment includes two revisions to the base authorization bill to reflect previous agreements between the Transportation and Infrastructure Committee and the Science Committee on provisions that were part of H.R. 2881, The FAA Reauthorization Act of 2007, which passed the House on September 20, 2007. The Manager's Amendment revises Section 305 of the bill, to require the Federal Aviation Administration (FAA) Administrator, in coordination with NASA and the United States Climate Change Science Program to establish a research initiative to assess the impact of aviation on the climate and to evaluate mitigation approaches. In addition, this section, as amended, requires, within one year of the date of enactment, the participating federal agencies to develop a plan for a research program dedicated to aviation's impact on the climate.

The Manager's Amendment also amends Section 306 of the bill to require the FAA, in consultation with other agencies, to establish a research program on ways to improve the confidence in and timeliness of certification of new technologies for introduction into the National Airspace System. In addition, this section, as amended, requires the FAA to develop a research plan, and to contract with the National Research Council to conduct an independent review of the research program plan, with a subsequent report to the committees of jurisdiction, including the Committee on Transportation and Infrastructure.

Madam Chairman, I support H.R. 6063, as amended by the Manager's Amendment, and urge my colleagues to do so as well.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Tennessee (Mr. GORDON).

The amendment was agreed to.

AMENDMENT NO. 2 OFFERED BY MR. FEENEY

The CHAIRMAN. It is now in order to consider amendment No. 2 printed in House Report 110–707.

Mr. FEENEY. Madam Chairman, I have an amendment under the name of Mr. ROHRABACHER at the desk.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 2 offered by Mr. FEENEY:

In title VIII, add at the end the following new section (and amend the table of contents accordingly):

SEC. 807. INTERNATIONAL RESOURCES.

It is the sense of Congress that, since an estimated 25,000 asteroids of concern have yet to be discovered and monitored, the United States should seek to obtain commitments for cooperation from other nations with significant resources for contributing to a thorough and timely search for such objects and an identification of their characteristics.

The CHAIRMAN. Pursuant to House Resolution 1257, the gentleman from Florida (Mr. FEENEY) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Florida.

□ 1615

Mr. FEENEY. Madam Chairman, on behalf of this amendment, as Congressman ROHRABACHER explained earlier, this amendment is a sense of the Congress provision stating the U.S. should seek to obtain commitments for cooperation from other nations in the search for near-Earth objects.

Mr. ROHRABACHER has been an ardent advocate in our committee for the potential threat posed by asteroids and comets having orbits that bring them close to Earth and the devastation they could create should one of them impact us.

By the way, I have sat through hearings, along with Congressman UDALL and others, and we have incredibly sophisticated technology and capabilities one day to protect Earth if we know we are going to be targeted by an asteroid or comet, for example. In fact, the testimony was that some 99 percent of the resources today globally to prepare for this eventuality are American tax dollars. It seems seeking cooperation on behalf of all humankind only makes sense.

Our committee held a highly informative set of hearings on near-Earth objects late last fall. It is clear to me that the entire world community needs to be much more vigilant in finding, tracking and characterizing near-Earth objects and developing deflection capabilities and technologies.

I urge support for this amendment.

Mr. GORDON of Tennessee. Will the gentleman yield?

Mr. FEENEY. I will be glad to.

Mr. GORDON of Tennessee. Let me just quickly add that our colleague and friend to both of us, Mr. ROHRABACHER, has long been an advocate for the detection and monitoring of near-Earth objects. I don't know that anybody has done any more on that. I certainly commend this constructive amendment.

Mr. FEENEY. Reclaiming my time just to close on behalf of Mr. ROHRABACHER's amendment, he is a great advocate, but I felt more comfortable after I heard from a bevy of the world's best astrophysicists that this is not only a real threat, but a real potential way to solve a threat to humankind.

With that, I would urge my colleagues to support the Rohrabacher amendment.

Mr. ROHRABACHER. Madam Chairman, my amendment offered by Mr. FEENEY encourages NASA to seek increased international cooperation to find and characterize all natural bodies in outer space over 140 meters in size that pass close to the Earth, referred to as near-Earth objects. Estimates of the total numbers of such objects vary from 25,000 to 100,000. This threat to the Earth is a worldwide matter of potentially catastrophic proportions should a collision with Earth occur, and the responsibility of dealing with it should not fall entirely on the United States or NASA, in particular.

The motivation and timing for this amendment arises from discussions with Russian and German government officials on furthering cooperation with the U.S. in science and technology that occurred during a CODEL that I attended over the Memorial Day recess.

The specific suggestion to cooperate in the effort to find and characterize near-Earth objects was greeted with great enthusiasm by the government officials with whom I met during the CODEL.

The initiative encouraged under my amendment is intended to provide relief for the enormous burden being placed on NASA to find and characterize the vast number of these objects estimated to exist. Many countries around the world have very capable astronomical observatories that can assist (and probably have to some extent).

In addition to telescopes, deep space radars play a critical role in quickly authenticating any impending threats that may be indicated from optical observations. Though the United States has the world's most capable deep space radar, namely the Arecibo Radar, and also the somewhat less capable Goldstone Radar, the Russian RT–70 Radar may be able to provide some contributions as well. Furthermore, certain large radio astronomy facilities around the world may be able to participate by pairing with these powerful U.S. deep space radars.

Mr. FEENEY. I yield back the balance of my time.

The CHAIRMAN. Does any Member seek time in opposition?

If not, the question is on the amendment offered by the gentleman from Florida (Mr. FEENEY).

The amendment was agreed to.

AMENDMENT NO. 3 OFFERED BY MR. WU

The CHAIRMAN. It is now in order to consider amendment No. 3 printed in House Report 110–707.

Mr. WU. Madam Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 3 offered by Mr. WU:

In section 401, insert at the end the following: ''When appropriate, the United States should lead confidence building measures that advance the long-term initiative for international cooperation.''.

The CHAIRMAN. Pursuant to House Resolution 1257, the gentleman from Oregon (Mr. WU) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Oregon.

Mr. WU. Madam Chairman, I rise in support of my amendment to build international trust and confidence in human space flight.

For decades, the United States and Russia were the only countries that had viable human space programs. In recent years, a number of countries have entered space or have expressed their intent to do so. This amendment recognizes the new playing field in space and includes a sense of Congress that the President of the United States should invite other spacefaring nations and soon-to-be spacefaring nations to participate in a long-term international initiative under our leadership.

My amendment would add a sentence to this sense of Congress that the United States should engage in confidence-building measures that advance this long-term initiative. With more countries in space, we need to ensure that space will not be used for hostile purposes.

I commend Chairman UDALL for proposing a long-term international initiative that will work toward that end. Confidence-building measures will encourage short-term actions that advance the long-term initiative for international cooperation in space. The United States and Russia engaged in confidence-building measures when Apollo 18 and Soyuz 19 connected in space. My amendment encourages similar actions between the United States and other members of the international space community. Actions like these will encourage the peaceful exploration of space.

I urge adoption of the amendment.

I reserve the balance of my time.

The CHAIRMAN. The Chair recognizes the gentleman from Florida.

Mr. FEENEY. Thank you, Madam Chairman.

I do not rise in opposition to the amendment. I should say I have no objection to the amendment. I have read it very carefully, and I appreciate the language ''when appropriate.'' Of course, it would be the United States that determined, in my view, when international confidence-building measures would be appropriate.

I should say there are times when, for example, sharing sensitive technologies with certain countries may be inappropriate, if we don't have confidence what they may use those technologies for or what their long-term intentions are. On the other hand, there are things we ought to clearly explore sharing with every spacefaring Nation; for example, a common docking device with the Shuttle, perhaps, so any nation in the event of emergency may be able to help rescue our astronauts.

I should also suggest, as I talked about earlier, that space is developing. It is no longer a bipolar world. Historically, people have out of habit and out of practicality had to rely on asking the U.S. if they wanted to send a satellite, for example, into orbit, to see whether or not that satellite would safely orbit the Earth without colliding into another country's satellite. That is not true because of any international treaty or convention. Anybody can send anything into space. The truth is, in terms of space law, we have really sort of an international anarchy, just as originally when we with had travel by navy or by commerce through the seas and ultimately international air travel.

There has to be some way to communicate ultimately in terms of maintaining space traffic. Stopping the creation of space junk or debris that would threaten all peacefaring uses of space would be another example of appropriate times the U.S. should lead in confidence-building measures to advance long-term initiatives for international cooperation.

With that, again, I have no objection to the amendment.

I yield back the balance of my time.

Mr. WU. Madam Chairman, I urge adoption of this amendment and yield back the balance of my time.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Oregon (Mr. WU).

The amendment was agreed to.

AMENDMENT NO. 4 OFFERED BY MR. WU

The CHAIRMAN. It is now in order to consider amendment No. 4 printed in House Report 110–707.

Mr. WU. Madam Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 4 offered by Mr. WU:

In title XI, add at the end the following new section (and amend the table of contents accordingly):

SEC. 1109. SENSE OF CONGRESS.

It is the sense of Congress that NASA should not dilute, distort, suppress, or impede scientific research or the dissemination thereof.

The CHAIRMAN. Pursuant to House Resolution 1257, the gentleman from Oregon (Mr. WU) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Oregon.

Mr. WU. Madam Chairman, I rise in strong support of scientific integrity at NASA and everywhere else in this Federal Government.

Earlier this month, the Inspector General at NASA released a report regarding allegations that NASA suppressed climate change science and denied media access to a NASA scientist. As recent news reports have documented, this report came from the revelation in 2006 that an administration official had intervened in communications between climate change scientists and the press for political purposes.

The report acknowledged that from the fall of 2004 through early 2006, the NASA Public Affairs Office managed the topic of climate science ''in a manner that reduced, marginalized, or mischaracterized climate change science made available to the general public through those particular media over which the Office of Public Affairs had control.''

The report also found that these actions were inconsistent with NASA's mandate and purpose to allow ''the widest practical and appropriate dissemination of information concerning NASA's activities and results.''

My amendment expresses the sense of Congress to reiterate the original intent of NASA's responsibilities. We are at a singular moment in time when climate change constitutes the challenge of our generation. Let us not fail. Let us base climate change information on science, not ideology.

This amendment is about far more than climate change. I believe scientific integrity should be held as a value throughout NASA and throughout our government. The safety of astronauts who are sent to space is dependent on sound science. We should not compromise scientific integrity for political gain or private profit. We should not compromise it in any situation. My amendment sends a message that Congress rebuffs the attempts of those who would marginalize science for the sake of ideology or politics.

I urge my colleagues to support this amendment.

I reserve the balance of my time.

Mr. FEENEY. Madam Chairman, I rise in order to address the amendment, to claim the minority time.

The CHAIRMAN. Is the gentleman opposed to the amendment?

Mr. FEENEY. For purposes of debate, I may well be opposed, yes.

The CHAIRMAN. The gentleman from Florida is recognized for 5 minutes.

Mr. FEENEY. Madam Chairman, I have carefully read the amendment, and while I may not press my objection, I will state that the amendment, in my view, is unnecessary, that NASA has a policy in place that goes to the very same points expressed in the amendment, and perhaps unintentionally this amendment implies that NASA cannot be trusted to factually in an unbiased manner publicize research results conducted by agency scientists.

Several years ago, NASA's Public Affairs Office was accused with inappropriately choosing which NASA scientists participated in specific interviews with the press. Once this interference was brought to NASA Administrator Michael Griffin's attention, he quickly and forcefully intervened, assuring Congress, NASA researchers and employees, and the public that NASA will never seek to censor agency scientists.

In a letter dated March 30, 2006, and this issue has been addressed over and over again, addressed to former Science Committee Chairman Sherry Boehlert, Mr. Griffin stated, ''I will not tolerate any policy or action where any NASA employee may filter, alter or

censor scientific findings and facts, and I want to reaffirm that NASA has always been and will continue to be committed to open scientific and technical inquiry and dialogue with the public.''

Mr. Griffin then formed a policy development team comprised of NASA employees with science, legal and public affairs backgrounds to review existing policies, identify ways to improve them, and develop agency practices to maintain NASA's commitment for full and open discourse on scientific, technical and safety issues. The result of their work was a series of revisions to 14 Code of Federal Regulations, section 1213, which guides the agency's public affairs policies, which all Americans can visit.

Mr. Griffin then formed a policy development team comprised of NASA employees with science, legal and public affairs backgrounds to review existing policies, identify ways to improve them, and develop agency practices to maintain NASA's commitment for full and open discourse on scientific, technical and safety issues. The results of their work was a series of revisions to 14 CFR (Code of Federal Regulations), Section 1213, which guides the agency's public affairs policies.

More recently, the NASA Office of Inspector General concluded an investigation in response to a Congressional inquiry dating back to 2006, requesting a formal investigation about ''political interference'' by NASA public affairs officials.

The IG's investigation found that ''. . . during the fall of 2004 through early 2006, the NASA Headquarters Office of Public Affairs managed the topic of climate change in a manner that reduced, marginalized, or mischaracterized climate change science made available to the general public through those particular media over which the Office of Public Affairs had control. We also concluded that the climate change editorial decisions were localized within the NASA Headquarters Office of Public Affairs; we found no credible evidence suggesting that senior NASA or Administration officials directed the NASA Headquarters Office of Public Affairs to minimize information related to climate change. To the contrary, we found that once NASA leadership within the Office of the Administrator were made aware of the scope of the conflict between the Office of Public Affairs and scientists working on climate change, they aggressively implemented new policies with a view toward improved processes in editorial decision-making relating to scientific public affairs matters.''

The IG's report also stated: ''With respect to NASA's climate change research activities, we found no evidence indicating that NASA blocked or interfered with the actual research activities of its climate change scientists . . . (W)e found that NASA systematically distributed its technical climate change research throughout the scientific community and otherwise made it available through a variety of specialized forums, such as scientific journals, professional conferences, and public appearances by NASA scientists.''

Additionally, a May 2007 GAO report found ''that NASA policies are generally clear and should help facilitate the dissemination of research results. For example, NASA's recently revised media policy clearly defines the roles and responsibilities for managers, researchers, and public affairs staff; details steps in the process for dissemination via press releases and interviews; and describes a process to resolve disputes about agency decisions regarding press releases.''

In closing, while I have no objection to the gentleman's (Mr. WU) amendment, I don't want Members to surmise that NASA science findings are being manipulated by agency management. That is not what the NASA IG, or GAO reports found.

Madam Chairman, I don't specifically object to the language of this amendment, because I think it is consistent with NASA policy and Michael Griffin's great efforts to explain to the public that he will insist and has insisted on this policy. But I will remind all of us that a May 2007 GAO report found ''NASA policies are generally clear and should help facilitate the dissemination of research results. For example, NASA's recently revised media policy clearly defines the roles and responsibilities for managers, researchers, and public affairs staff, details steps in the process for dissemination of press releases and interviews, and describes a process to resolve disputes about agency decisions regarding press releases.''

In closing, while I do not object to Mr. WU's amendment, I don't want Members to surmise that NASA science findings are being manipulated by current agency management. That is not what NASA, IG, or GAO reports found.

Again, we have no objection to the language that Mr. WU offers.

Madam Chairman, I yield back the balance of my time.

Mr. WU. Madam Chairman, I yield 2 minutes to the chairman of the Space Subcommittee, the gentleman from Colorado (Mr. UDALL).

Mr. UDALL of Colorado. I thank the gentleman from Oregon for yielding and thank him for his leadership on the committee.

I rise in support of this amendment on scientific integrity and openness at NASA. I want to commend the gentleman from Oregon for his action that we stay vigilant on this matter.

A few years ago, concerns were raised about political interference in the discussion of scientific research and results by NASA scientists. These concerns about scientific openness were and are serious, and we need to ensure that all measures are in place to prevent such interference.

It is true that the NASA Administrator, Dr. Griffin, took swift action in response to the reports of political interference and NASA revised the agency policy on the release of information of news and media, and I want to commend Dr. Griffin on his clear commitment to scientific openness. That said, we need to continue, Madam Chairman, our oversight on scientific integrity to ensure that Americans continue to have confidence in the important scientific research results that NASA provides to all of us and to our Nation.

So I again want to thank the gentleman from Oregon for his initiative, and I urge my colleagues to support it.

□ 1630

Mr. WU. Madam Chairman, I would like to submit a letter from Francesca T. Grifo, Senior Scientist and Director, Scientific Integrity Program, Union of Concerned Scientists into the CONGRESSIONAL RECORD.

UNION OF CONCERNED SCIENTISTS,
June 11, 2008.

HON. David Wu,
Rayburn House Office Building,
Washington, DC.

DEAR REPRESENTATIVE WU: The Scientific Integrity Program of the Union of Concerned Scientists supports your amendment to H.R. 6063, the NASA Authorization Act. This amendment will make clear that Congress intends that scientific research developed at NASA be free of political interference, and that NASA scientists are able to disseminate their findings without fear of retaliation.

We know that the problem of political interference in federal science is a widespread and serious one. Indeed, of the nearly 3,400 federal scientists across nine agencies who have responded to questionnaires by the Union of Concerned Scientists, more than 1,100 scientists report that they fear retaliation for openly expressing concerns about their agency's mission-driven work.

Your amendment will send a signal to this Administration and future Administrations that this state of affairs cannot and should not continue.

Sincerely,

FRANCESCA T. GRIFO,
Senior Scientist and Director,
Scientific Integrity Program.

I think that we need to be concerned about scientific integrity at NASA always, and we also need to be concerned about scientific integrity at other agencies, whether it's the EPA or the FDA, throughout the Federal Government. We intend to work on those agencies across the spectrum to ensure that ideology does not overtake sound science as this government moves forward towards research and the development of sound policy.

Madam Chairman, I yield back the balance of my time.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Oregon (Mr. WU).

The amendment was agreed to.

AMENDMENT NO. 5 OFFERED BY MR. LAMPSON

The CHAIRMAN. It is now in order to consider amendment No. 5 printed in House Report 110–707.

Mr. LAMPSON. Madam Chairman, I have an amendment at the desk.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 5 offered by Mr. LAMPSON:

In title XI, add at the end the following new section (and amend the table of contents accordingly):

SEC. 1109. EXCEPTION TO ALTERNATIVE FUEL PROCUREMENT REQUIREMENT.

Section 526(a) of the Energy Independence and Security Act of 2007 (42 U.S.C. 17142(a)) does not prohibit NASA from entering into a contract to purchase a generally available fuel that is not an alternative or synthetic fuel or predominantly produced from a nonconventional petroleum source, if—

(1) the contract does not specifically require the contractor to provide an alternative or synthetic fuel or fuel from a nonconventional petroleum source;

(2) the purpose of the contract is not to obtain an alternative or synthetic fuel or fuel from a nonconventional petroleum source; and

(3) the contract does not provide incentives for a refinery upgrade or expansion to allow a refinery to use or increase its use of fuel from a nonconventional petroleum source.

The CHAIRMAN. Pursuant to House Resolution 1257, the gentleman from Texas (Mr. LAMPSON) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Texas.

Mr. LAMPSON. Madam Chairman, I yield myself such time as I might consume.

Today I rise in support of my amendment to the National Aeronautics and Space Administration Authorization Act of 2008. This amendment would clarify section 526 of the Energy Independence and Security Act, which addresses the procurement of fuels by a Federal agency. This amendment seeks to provide guidance for implementation of the provision by establishing conditions by which NASA would be allowed to enter into a contract to purchase a generally available fuel, so long as it is not predominantly an alternative or synthetic fuel.

Because section 526 doesn't define alternative or synthetic fuel or nonconventional petroleum sources, many stakeholders, including refiners in southeast Texas, believe that section 526 could have unintended consequences, preventing refiners from mixing fuel received from nonconventional sources such as oil sands with conventionally derived oil.

Oil sands account for about 5 percent of the total U.S. oil supply, and it's common practice to mix it with fuel that is derived from other sources. It's very difficult for an end user and consumer to determine whether a fuel contains petroleum from oil sands or other nonconventional sources.

With half of Canadian crude produced from these sources, this could have an adverse effect on the relationship that we enjoy with our largest supplier of oil. Additionally, most diesel fuel is mixed with some biodiesel, which could also mean that its procurement could be prohibited under this section. While the intention of this language may not have been to prohibit the purchase of fuel, the small amounts from tar sands or oil shale, section 526 is written so broadly, with no definition provided, that it could be interpreted either way. That's why a clarification is needed.

I know that our colleague, Congressman GINGREY, made a proposal the other day in committee. I viewed the proposal that we have come up with here as a compromise to that suggestion.

Adoption of this amendment will allow NASA to contract for generally available fuels, as it always, has as long as the fuel is not predominantly comprised of petroleum from nonconventional sources such as Canadian oil sands with a greenhouse gas footprint that is higher than conventional oils and fuels. This allows some wiggle room and recognizes the complexities of the refining process while supporting the original intent of not extending or exceeding current emission levels.

Finally, I would like to note that when the House passed the FY09 defense authorization act last month, a similar amendment was approved by this committee and accepted by voice vote on the floor. While that amendment had a government-wide application, this seeks to clarify section 526 in order to allow NASA to meet present and future energy needs.

Madam Chairman, I reserve the balance of my time.

Mr. GINGREY. Madam Chairman, I rise to claim time in opposition to the amendment.

The CHAIRMAN. The gentleman from Georgia is recognized for 5 minutes.

Mr. GINGREY. Madam Chairman, I have a number of concerns with the amendment offered by my friend and colleague, the gentleman from Texas, my colleague on the Science Committee.

Unfortunately, I do not believe that this amendment does anything to alleviate the Draconian problems presented to us by section 526 of the Energy Independence and Security Act of 2007.

Even if this amendment passes, Americans will still not be able to increase the supply of fuels from alternative sources derived from resources available in the United States. Oil shale, with its estimated 1.5 trillion barrels of petroleum in rock, would remain trapped there in our southwestern States, I think five States have a lot of this oil shale that's there for the taking. We, furthermore, will not be able to use clean carbon captured coal-to-liquid fuel.

So the amendment intends to create an exception under section 526 for generally available fuel not predominantly produced from a nonconventional petroleum source, and NASA, under the amendment, will still be able to purchase Canadian fuels that do have traces of oil sands, as the gentleman says, that may create more of a carbon footprint than completely conventional fuel. And this is what basically section 526 is. As the gentleman explained, he is trying to allow an exception so that this fuel that we purchase from Canada, a lot of people think most of our foreign sources of fuel are from OPEC or Venezuela, but actually, Madam Chairman, they are from Canada. Some of this fuel does have the tar sands footprint in it.

The gentleman, and I have no objection to that, is saying let us continue to purchase this fuel and not be restricted by 526. Yet my opposition is this, the agency won't be able to utilize any of the sources of fuel that may be totally derived from resources we have readily available in the good-old USA, clean domestic alternatives, coal, natural gas, biomass and, as I mentioned, oil shale that is estimated to have 1.5 trillion barrels of petroleum that can be extracted from that in our own country.

At committee markup, Science Committee and at the Rules Committee, I offered amendments that would have removed the handcuffs placed on the NASA administrator by section 526. I would have been happy to work with my good friend from Texas to protect his amendment so that implementation of it would have, indeed, a positive effect for NASA. Unfortunately, I just don't think the amendment does much of anything.

I fear that the amendment does nothing to rectify, as I said, the underlying problem with 526 that prevents the Federal Government, any agency of the Federal Government, not just NASA, but also the Department of Defense, which utilizes something like 380,000 barrels of refined petroleum products every day, every day, and the increased cost to the Department of Defense is $9 billion. Just the increase in the year 2008, the increased fuel cost to NASA over the last 5 years has been 400 percent. It has gone from $4.5 million a year to $18.3 million a year.

Our efforts should be focused on easing the pain felt by American taxpayers, not codifying this misguided policy, 526, that prevents us from future innovation. Again, the gentleman's amendment, in my opinion, does no harm, but it does very little good.

I felt compelled to stand and express my opposition—not strong opposition to the amendment—but rather to make this point that we need to allow the administrator of NASA to have a waiver, at least have a waiver if, in his knowledge of innovation and what they are doing in trying to develop alternative fuels that are available in this country, he would not be bound by the crazy restrictions put on him and other agencies by section 526 of this so-called Energy Independence and Security Act of 2007 passed 17 months ago. Since that time the price of a gallon of regular gasoline has gone up by $1.70, up to over $4.05 a gallon.

I respectfully oppose the gentleman's amendment.

The CHAIRMAN. The time of the gentleman from Georgia has expired.

Mr. LAMPSON. I yield myself 1 minute, Madam Chairman.

I agree with much of what Mr. GINGREY has said. I want to point out

that the intent of the law, as passed, the Energy Independence and Security Act, specifies that the lifecycle greenhouse gas emissions, which are higher, oftentimes, in these oil sales, is what was intended to be prohibited.

If we were using, or NASA were purchasing all of their fuel for their operation, then it would not fall within the bounds of this act. But NASA can purchase generally available fuels that may include a blend of fuel from oil sands refined in existing commercial processes. The purpose of the contract can't be to obtain fuels from nonconventional petroleum sources or otherwise promote the expansion of nonconventional fuels with high life-cycle carbon emissions. We believe that the refiners within my district that are making many of the fuels that are actually being purchased by NASA will use some of these nonconventional sources of energy.

As it's blended, it can still be used by NASA so that there is some benefit to them.

Mr. FEENEY. Would the gentleman yield for a question?

Mr. LAMPSON. I would yield for a few seconds, yes.

Mr. FEENEY. I don't know whether, candidly, I support or oppose the amendment, because it has some very technical effects in its interplay with other portions of Federal statutes and requirements and regulation.

Just one of the many questions I have would be that it seems, as I read the amendment, that it establishes different conditions on contracting fuel versus those established in section 526. So I guess one of my questions, maybe the most important, since we don't have a lot of time, do the conditions in your amendment supplant the greenhouse gas emission criteria found in 526, or do they remain in effect, and are these conditions in addition to the 526 regulations?

Mr. LAMPSON. They remain in effect, but this just clarifies what the intent of the legislation was and is. It's going to allow blends of those fuels to be used by NASA until we can do the research that shows that emissions are going to be reduced below the amount of emissions from traditional fuels.

Mr. FEENEY. If the gentleman will yield.

Mr. LAMPSON. Am I within my 1 minute, Madam Chairman? Have I used up my minute yet, and how much time do I have left before I say that I will yield?

The CHAIRMAN. The gentleman is recognized for just 1 minute. The gentleman has 1 minute remaining.

Mr. LAMPSON. Would you use your time, please?

Mr. FEENEY. If I have any. I don't know that we have any more time.

Could I ask unanimous consent that each side have an additional 2 minutes?

The CHAIRMAN. Is there objection to the request of the gentleman from Florida?

There was no objection.

Mr. LAMPSON. I yield to the gentleman.

Mr. FEENEY. Actually if I could suggest, rather than taking up your 2 minutes, I would be grateful if you yielded, but I will yield back to you and claim my own 2 minutes so that you can use yours since you were gracious enough not to object.

Mr. LAMPSON. Then I will reserve my time and let the gentleman proceed.

The CHAIRMAN. The Chair would like to clarify that it is the gentleman from Georgia who has the 2 minutes.

Mr. GINGREY. Madam Chairman, thank you very much.

I very graciously at this time will yield to the subcommittee ranking member of the NASA Subcommittee of Science and Technology, my good friend from Florida (Mr. FEENEY).

□ 1645

Mr. FEENEY. I thank the gentleman.

This amendment may be very positive. The problem is that it conflicts with other statutes and regulations. It is very complicated as we read it.

What my friend says is a clarifying amendment actually creates a lot more ambiguity in our minds about the interplay of these different standards.

I talked about the interplay with 526, and I still don't know which set of rules will govern, the set of rules in the gentleman's amendment or section 526.

We also seem to cite a section of the Energy Independence and Security Act, 42 U.S.C. 17142. There is currently no section 526(a) nor a 42 U.S.C. 17142(a) in the law, and yet I believe the gentleman's amendment cites these sections, as I read it, that do not exist in current law.

I have a concern about the amendment's intention. Do you want to create an exemption under 526 for generally available fuel that is not predominantly produced from a nonconventional petroleum source, or does it create a broader exemption for all alternative or synthetic fuels as referenced in section 526?

So I guess I have a number of very complex questions. I wish this is something we might have dealt with in committee where we have a number of experts, both members and staff. While I don't know that I object, it is because I just don't understand all of the different regulations and statutes and the interplay, and this seems to be one more additional attempt at dealing with whether NASA can or can't do things, and I really have no idea whether this is in addition to, or whether it is consistent with, or whether it may be mutually exclusive with provisions in other portions of the law, and I wish we could spend some time with technical staff to iron out these difficulties.

With that, having expressed concern and not necessarily opposing the amendment because I don't really understand all of the ways it will be enforced given other statutes and regulations.

Mr. GORDON of Tennessee. Would the gentleman yield?

Mr. FEENEY. I would be happy to yield to the chairman.

Mr. GORDON of Tennessee. Let me just suggest that this is one more process in getting a law enacted. The Senate will pass a bill, and we will go to conference. I am sure Mr. LAMPSON can answer very well here, but this can be a continuing dialogue as we move forward.

Mr. FEENEY. We appreciate that. Having said that, on a technical issue like this, it sure would have been great to take a more technical look at this at the subcommittee or committee level. Having said that, I appreciate the chairman's gracious offer to help clarify for those of us who think more ambiguity, not less, is being created by this amendment, and what the ultimate impact will be.

Mr. LAMPSON. Madam Chairman, I yield 1 minute to Chairman UDALL.

Mr. UDALL of Colorado. Madam Chairman, I am pleased to support this amendment.

This amendment is similar to the Boren amendment offered to the defense authorization package recently. That amendment passed with a voice vote on the floor.

This amendment as well seeks to clarify requirements of section 526 of the Energy Independence and Security Act of 2007 to allow NASA to procure conventional fuels that contain incidental amounts of unconventional fuels.

Section 526, Madam Chairman, is important because it establishes a positive benchmark for future alternative fuels, that their lifecycle greenhouse gas emissions be less than or equal to those emissions from conventional fuels.

The amendment clarifies section 526 while retaining the standard it sets for greenhouse gas emissions.

I want to thank the Member from Texas for bringing this important amendment and urge all Members to support the amendment.

Mr. LAMPSON. Madam Chairman, I just recognize in closing that this is not a complicated piece of legislation. It is one that does not stop these fuels from being produced or the research and development on these types of sources of energy. It allows NASA to continue to purchase the kinds of fuels without restrictions and without putting themselves into the jeopardy that is asked for within section 526. So it is a simple amendment that was voice voted in the defense authorization, and we believe it should be here as well as the bill came out of committee.

Madam Chairman, I yield back the balance of my time.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Texas (Mr. LAMPSON).

The question was taken; and the Chairman announced that the ayes appeared to have it.

Mr. LAMPSON. Madam Chairman, I demand a recorded vote.

The CHAIRMAN. Pursuant to clause 6 of rule XVIII, further proceedings on the amendment offered by the gentleman from Texas will be postponed.

AMENDMENT NO. 6 OFFERED BY MR. ARCURI

The CHAIRMAN. It is now in order to consider amendment No. 6 printed in House Report 110–707.

Mr. ARCURI. Madam Chairman, I have an amendment at the desk.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 6 offered by Mr. ARCURI:

In section 407(a), add at the end the following: ''As part of the technology plan, the Administrator shall examine the feasibility of having NASA enter into contracts with appropriate public, private sector, and international partners to broadcast electronically, including via the Internet, images and multimedia records delivered from its missions in space to the public and shall identify issues associated with such contracts. In any such contracts, NASA would be required to adhere to a transparent bidding process to award contracts, pursuant to United States law.''.

The CHAIRMAN. Pursuant to House Resolution 1257, the gentleman from New York (Mr. ARCURI) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from New York.

Mr. ARCURI. Madam Chair, NASA's accomplishments over the years have led to some of the greatest advances in human history. These scientific discoveries have led to everything from prolonging the average life span to improving the overall quality of life. NASA's research and exploration has also helped to unlock some of the greatest mysteries in the universe. The problem, however, is that too often the American public doesn't have an opportunity to fully experience NASA's accomplishments. It is when these accomplishments are transferred from the Federal sector to the private sector and the general public that the true benefits of what has been achieved can be realized.

Clearly, we don't have the ability or the financial means to shuttle every American into space, but we can do a better job of bringing the space experience into televisions, computers, and classrooms around the world.

The House Science and Technology Committee, under the leadership of Chairman GORDON and Ranking Member HALL and Chairman UDALL, recognize that point. The underlying bill includes language directing the NASA administrator to develop a technology plan that will allow the general public to experience missions to the Moon, Mars and other destinations in our solar system.

My amendment aims to take this effort and expand it in a way that leverages existing technology underway at our universities and high-tech businesses.

Specifically, my amendment tasks NASA to examine the feasibility of entering into contracts with appropriate public-private sector and international partners to share images and video of space missions with the public. The amendment promotes good government by requiring NASA to engage in a transparent bidding process when awarding contracts as it sees fit.

This new chapter in scientific discovery presents a valuable opportunity to engage public and private sectors in advancing NASA's mission for the 21st century. My upstate New York district is fast becoming a science and technology hub. We have an opening here to work together with colleges and universities, private research facilities, and small and large high-tech businesses to provide NASA with the tools it needs to better educate the public about space.

I would like to highlight that this amendment is intended to provide NASA with an additional resource to meet its goals. This measure would authorize NASA to conduct its own feasibility study to determine if and how it can best use the talents of our independent innovators to support its new international exploration initiative. This requirement would grant NASA the flexibility it needs to create a plan that best fits the ideas of its new program.

This amendment would also require all NASA contract decisions to be awarded following a fair and transparent bidding process.

This amendment has the backing of the State University of New York, the New York State section of the American Physical Society, the American Association of Geographers and the Information Technology Association of America. I respectfully urge all of my colleagues to support this amendment and support the contributions that our public and private universities and businesses make to scientific and technological progress in this country.

I reserve the balance of my time.

Mr. FEENEY. Madam Chairman, I rise, at least for purposes of debate, to be recognized in opposition.

The CHAIRMAN. The gentleman from Florida is recognized for 5 minutes.

Mr. FEENEY. I appreciate the gentleman's amendment. I think it is very well-intentioned. I do not intend to object to the language. I do believe it is designed to help NASA distribute its space images and multimedia records to the public. I share that goal; but I should say that I think this amendment is superfluous. I think it is already contained in the bill language itself. Now superfluity is not necessarily an awful thing. Sometimes the best thing we do here is just to repeat what we have already done, and it probably does very little harm.

But I would point out that section 407 clearly instructs NASA to develop a plan, to identify opportunities to leverage the very same technologies Mr. ARCURI references in his amendment.

The gentleman's amendment seeks NASA to develop a plan and examine the feasibility to ''broadcast electronically, including via the Internet.'' The language in the bill talks about already ''rapidly delivering the content through extended high bandwidth communications networks.''

So I think Mr. ARCURI's concerns are already adequately addressed in the bill. I would simply argue that they are unnecessary. Having said that, I would not object to them being included.

I reserve the balance of my time.

Mr. ARCURI. I thank the gentleman for his comments. I would just point out what this amendment does is it attempts to get the private sector more engaged by promoting within NASA the push to transfer not from the public sector, not to just have this go from the public sector to the universities, but from the public sector to the private sector, to get the private sector more engaged and more involved in distributing the information. So that is slightly different than what I think the bill has because we do attempt to get the private sector more engaged. After all, that is probably the best way, by using the market system, to get the information out.

Madam Chairman, I yield back the balance of my time.

Mr. FEENEY. Madam Chairman, I appreciate and I don't dispute the intentions that the gentleman has. I agree with that, and I believe that the current language in the bill requires NASA to rapidly deliver this content that you are talking about through high bandwidth communications networks, and I think that includes universities in the private sector, et cetera.

Having said that, because the intent of the language clearly is not something I object to, I will not oppose the amendment.

Madam Chairman, I yield back the balance of my time.

The CHAIRMAN. The question is on the amendment offered by the gentleman from New York (Mr. ARCURI).

The amendment was agreed to.

AMENDMENT NO. 7 OFFERED BY MR. WU

The CHAIRMAN. It is now in order to consider amendment No. 7 printed in House Report 110–707.

Mr. WU. Madam Chairman, I rise on behalf of my friend and colleague, Mr. DEFAZIO of Oregon, who has an amendment at the desk.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 7 offered by Mr. WU:

In title IV, add at the end the following new section (and amend the table of contents accordingly):

SEC. 409. CONGRESSIONAL BUDGET OFFICE REPORT UPDATE.

Not later than 6 months after the date of enactment of this Act, the Congressional Budget Office shall update its report from 2004 on the budgetary analysis of NASA's Vision for the Nation's Space Exploration Program, including new estimates for Project Constellation, NASA's new generation of spacecraft designed for human spaceflight that will replace the Space Shuttle program.

The CHAIRMAN. Pursuant to House Resolution 1257, the gentleman from Oregon (Mr. WU) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Oregon.

Mr. WU. Again, on behalf of my good friend and colleague, Mr. DEFAZIO, I am presenting this amendment.

When the President announced his new vision for the Nation's space exploration program on January 14, 2004, he proposed a new human exploration vehicle to return to the Moon by 2020 and to leverage these lunar efforts to send a human mission to Mars.

After Mr. Bush unveiled his plan in 2004, a congressional subcommittee requested that the Congressional Budget Office perform a budgetary analysis of NASA's New Vision For Space Exploration, as this program was titled. The report was released in September of 2004 and concluded that NASA's long-term projections only included a 2 percent increase for inflation.

NASA's budget has undergone radical changes since the President's vision was announced in 2004. NASA's budget requests for aeronautics has been reduced by over $200 million. NASA's budget requests for science programs, including climate research, have been reduced by over $300 million. In stark contrast during the same period, overall funding requests for NASA have increased by over $2 billion.

Since the President first proposed his new ''vision for space exploration,'' we have spent more than $600 billion in Iraq, over $120 billion on Hurricane Katrina, and the Federal deficit has grown by over $2.4 trillion.

Mr. DEFAZIO's amendment will direct the Congressional Budget Office to update its 2004 budgetary analysis of the President's plan. This makes fiscal sense. It will give us a more complete picture of the budgetary hurdles the project will face and a more accurate assessment of its long-term costs.

□ 1700

Congress needs to continue to analyze the project as it moves forward and be mindful of its effect on other important NASA programs. If anyone claims that they believe that the report will be duplicative of previous GAO reports, the fact is that GAO hasn't done a true cost estimate of the program, but, rather, done risk assessments of the program. Budget and cost estimate analysis is something that the Congressional Budget Office usually handles, not the Government Accountability Office.

The GAO has done some high level budget analysis, but CBO will be able to give a much more detailed report. On Mr. DEFAZIO's behalf, I urge adoption of his amendment, and reserve the balance of my time.

Mr. FEENEY. Madam Chairman, I rise to claim the time in opposition, although I am not necessarily in opposition to the amendment.

The CHAIRMAN. Without objection, the gentleman from Florida is recognized for 5 minutes.

There was no objection.

Mr. FEENEY. I think all of us want to know the cost of every government project. That certainly includes Constellation.

As Mr. WU pointed out, on behalf of Mr. DEFAZIO, the GAO just gave us a very comprehensive report. We had a full hearing on the matter of the progress of the Constellation program.

I can tell you that there are some 56 annual reports that NASA has to give to Congress, and dozens of others that it has to give to other agencies, regulatory agencies and other governmental agencies. This is not a request that NASA add to their 100 or 150 reports an additional report. It's asking CBO to take an outside look. And I'm never opposed to transparency in government, especially cost.

I should point out that the amendment singles out Project Constellation for particular scrutiny. Project Constellation is our follow up to the Space Shuttle Human Space Flight Program which is clearly a top priority for NASA, and has been established in this Congress as a top priority.

The shuttle will be retired roughly at the end of this decade. Without Constellation, NASA will have no choice but to buy assets from other nations if we intend to maintain access to our own international space station.

We're going to be dependent on the Russians right now under a very bad plan, but the only plan we have for 5 years. Without Constellation, all hopes of accessing, through American capabilities, the international space station or venturing the moon or other planets or asteroids will simply disappear.

Not all of our colleagues pay as much attention as those of us that are on the floor here today to space. I think one of our colleagues recently suggested that the first manned lunar outpost in space be named after Neil Armstrong, the great first American ever on the Moon.

My question, in response, was why would the Chinese, who are going to get back to the Moon before us, give us permission to name their lunar outpost after an American? We've got to remind our colleagues that this is now an internationally competitive environment in more ways than one.

Constellation is a technology-driven program that will achieve its initial operational capability roughly in the Year 2015, hopefully earlier. NASA has worked hard to maintain their schedule. They give us reports every day. We had a GAO report.

Having said that, if the gentleman feels compelled to support the DeFazio amendment, and we have one additional report on the budgetary status, I don't have any objection to transparency in government. But at some point you're doing so many reports that it's hard to send people back to the moon if you're doing 150 or 200 reports for Congress and other agencies and spending all your time filling out paperwork.

These are really bright engineers. I want to get into the business of flying rockets and not doing more paperwork.

With that, I would yield back the balance of my time.

Mr. WU. Well, I certainly hope that Americans return to the Moon before anyone else.

I would point out to my friend and colleague from Florida, that we have named a number of things after Columbus, and well, he wasn't exactly an American. So, you know, you never know how far the generosity of spirit will go.

My good friend and colleague from Oregon (Mr. DEFAZIO) has, with his usual vigor, many reasons why a Congressional Budget Office report is appropriate under these circumstances. I have not delivered some of those more pointed arguments, and join with the gentleman from Florida to urge adoption of this amendment for both purposes of fiscal prudence and in the interest of our space program in which we have such a strong common interest.

I yield back the balance of my time.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Oregon (Mr. WU).

The amendment was agreed to.

AMENDMENT NO. 8 OFFERED BY MS. HARMAN

The CHAIRMAN. It is now in order to consider amendment No. 8 printed in House Report 110–707.

Ms. HARMAN. Madam Chairman, I have an amendment at the desk which you have just identified, and I rise in support of the amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 8 offered by Ms. HARMAN:

In title XI, add at the end the following new section (and amend the table of contents accordingly):

SEC. 1109. SENSE OF CONGRESS REGARDING THE NEED FOR A ROBUST WORKFORCE.

It is the sense of Congress that—

(1) a robust and highly skilled workforce is critical to the success of NASA's programs;

(2) voluntary attrition, the retirement of many senior workers, and difficulties in recruiting could leave NASA without access to the intellectual capital necessary to compete with its global competitors; and

(3) NASA should work cooperatively with other agencies of the United States Government responsible for programs related to space and the aerospace industry to develop and implement policies, including those with an emphasis on improving science, technology, engineering, and mathematics education at all levels, to sustain and expand the diverse workforce available to NASA.

The CHAIRMAN. Pursuant to House Resolution 1257, the gentlewoman from California (Ms. HARMAN) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentlewoman from California.

Ms. HARMAN. Madam Chairman, I rise in support of the Harman-Ehlers amendment and the underlying authorizing legislation.

Madam Chairman, I represent the heart of the aerospace industrial base,

and have long called my district the ''satellite center of the universe.''

I have always been mindful of the need for a skilled and diverse industrial base. Simply put, rocket scientists don't grow on trees.

Earlier this year, on a visit to a major aerospace firm in my district there was a stark reminder of the crisis facing that industry. Following a briefing on an important satellite program, I asked if any the employees in attendance had anything else to tell me. A 31-year old engineer raised his hand and said, ''all my peers are gone.'' Engineers his age, he explained, are leaving the aerospace industry for other fields, and very few are interested in taking their place.

The problem is twofold. More than 60 percent of the aerospace industry workers are over 45, and 26 percent of them are eligible for retirement in 2008. And, as a Nation, we have failed to inspire our kids, particularly girls, to go into STEM fields, science, technology, engineering and math.

There just isn't a pool of qualified workers for NASA and others to draw from. The result is a looming demographic cliff that leaves NASA and the industry without the intellectual capital necessary to keep pace with global competitors.

But the problem extends beyond NASA. The United States depends on this industrial base to give us the capabilities on the ground, in the air and in space that are essential to the way we wage war, collect intelligence and protect our homeland. This looming workforce shortfall could cripple not only NASA's ability to reach its goals, it could deal a serious blow to our national and our economic security.

The Harman-Ehlers amendment expresses the sense of Congress that a skilled workforce is essential to NASA's success, and that NASA should work cooperatively with other government agencies to sustain and expand a diverse workforce.

Madam Chairman, almost 50 years ago President Kennedy inspired a whole generation of Americans. American talent and ingenuity put a person on the moon in a decade. We need that kind of ambitious goal to inspire the next generation to be scientists, engineers and astronauts.

If we fail to dream big, to ask our kids to imagine a future beyond our humble planet, they will pursue other fields. There will be no one to invent the technologies and programs on which NASA's success and our national security depend. That future, Madam Chairman, is unacceptable.

I urge an ''aye'' vote for the Harman-Ehlers amendment, and would like to thank my coauthor, VERN EHLERS, a senior member of the Science Committee, who did seminal work in this field, is a true leader in this field, and a valued partner.

I reserve the balance of my time.

Mr. FEENEY. Madam Chairman, I rise to claim the time in opposition, although I am not necessarily in opposition to the amendment.

The CHAIRMAN. Without objection, the gentleman from Florida is recognized for 5 minutes.

There was no objection.

Mr. FEENEY. Madam Chairman, not only am I not in opposition, but I wholeheartedly and enthusiastically endorse the Harman-Ehlers amendment. And I should point out as she mentions the trouble in getting new people into the workforce and an aging and retiring workforce. By the way, one of those young engineers that works in the space field is my wife, and she remains eternally young. But she's the exception.

I've talked extensively about the competition, both civilian and commercial, coming from China. I can tell you that I recently visited CASC, which is the Chinese Civilian and Commercial Space Agency. They have 160,000 employees. About half of those are dedicated to space. And we asked the question, what the average age, because we were startled by the engineering manager that addressed us on their program, what the average age of the managers were in the Engineering Department. The average age of the managers was 40. We were stunned.

We asked, what's the average age of your engineers that are doing space work. And the answer is 30.

Madam Chairman, nothing could be more important to science and technology.

And with that, I want to yield the balance of my time, to, as the gentlelady said, a great advocate for science and space and technology, and for young people getting into these fields, Mr. EHLERS.

Mr. EHLERS. As has been stated, this is a labor of love for me for many years. But a few years ago I began noticing or realizing that we were approaching a major inflection point that we should be worried about.

As you heard from the principal author of this amendment, that it was in the 1960s that John Kennedy asked for us to go to the moon, proposed this advanced and wild notion, and that inspired a whole generation of Americans to become involved in aerospace.

Those individuals are now retiring. And because we hired so many in NASA at one time, they are all retiring at about the same time, which is going to leave us bereft of talent if we don't take action.

Because of this, 2 years I introduced a bill which was passed which established an interagency aerospace revitalization task force within the Federal Government. I would have liked to have it be more broad, but I couldn't persuade my colleagues to make that giant leap at that point.

But since then that task force which involves, I believe, 17 different Government agencies has worked together. The 2008 report of the Interagency Aerospace Revitalization Task Force was released earlier this year. I spoke at the release. And I was astounded at the number of people in the room. It was a local hotel. The room was overflowing with people concerned about aerospace employment and how we keep the aerospace effort going.

This amendment is intended to reinforce what we've talked about for the past 2 years, but it does something very important. As I mentioned, my bill simply addressed the interagency governmental work. But we also have to involve universities. We have to get students excited about aerospace again, and that's what this amendment will do. It will require that NASA reaches out beyond Government agencies, beyond its own boundaries and work with everyone possible to improve STEM education in America, get the young people of today excited about the opportunities in science, particularly in space.

So I thank the gentlewoman from California for initiating this amendment. I believe it's going to be very, very important to the future of NASA and for the future of our country, because if we don't get our kids back into math and science education, we are going to become a second-rate Nation.

Twenty years ago the nation of China and the nation of India both decided that their economic futures lay in developing highly skilled workers who understood mathematics and science. It worked, and they have gone ahead with leaps and bounds, while our students are still mired where they were 20 years ago.

At all levels, from kindergarten on up, we have it take note of that and we have to do a much better job of teaching our children mathematics and science, not just for the sake of NASA, although that's very important, but for the sake of our Nation if we wish to remain competitive with other countries.

I will reserve the balance of my time.

Ms. HARMAN. I am prepared to yield the balance of my time. I'm inquiring whether I'm the last speaker or Mr. EHLERS is the last speaker.

The CHAIRMAN. The gentlewoman has 2½ minutes.

Mr. EHLERS. I will be pleased to yield back the balance of my time.

Ms. HARMAN. Madam Chairman, in closing the debate on this amendment, I would just observe that during my first two terms in Congress, in the last century, I served on the Science Committee. It's a great committee. And I commend the current chairman, Mr. GORDON, for enormous leadership. He is fast and swift, and on his game. And this is probably the most important work we will do for our children and grandchildren. And as a grandmother of three, I want one of those children, like Mr. FEENEY's wife, to want to be an aerospace worker.

□ 1715

I hope that one of them chooses that occupation. I hope it's there for them.

This amendment, the Harman-Ehlers amendment, is our effort to keep this

potential alive, to make sure that our best and brightest kids want to do this work, and then that hopefully our dreams remain big and putting a person on the moon is just a first step to surveying the heavens in ways we can't even imagine.

So on behalf of dreamers, on behalf of an extraordinary industrial base, much of it in California's 36th Congressional District, and on behalf of three little grandchildren whom I love dearly, I urge an ''aye'' vote for the Harman-Ehlers amendment.

I yield back the balance of my time.

The CHAIRMAN. The question is on the amendment offered by the gentlewoman from California (Ms. HARMAN).

The amendment was agreed to.

AMENDMENT NO. 9 OFFERED BY MR. GORDON OF TENNESSEE

The CHAIRMAN. It is now in order to consider amendment No. 9 printed in House Report 110–707.

Mr. GORDON of Tennessee. Madam Chairman, I rise to offer an amendment on behalf of the gentleman from Iowa (Mr. BRALEY) who was required to return to his district.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 9 offered by Mr. GORDON of Tennessee:

In title II, add at the end the following new section (and amend the table of contents accordingly):

SEC. 208. TORNADOES.

The Administrator shall ensure that NASA gives high priority to those parts of its existing cooperative activities with NOAA that are related to the study of tornadoes, tornado-force winds, and other factors determined to influence the development of tornadoes, with the goal of improving the Nation's ability to predict tornado events. Further, the Administrator shall examine whether there are additional cooperative activities with NOAA that should be undertaken in the area of tornado research.

The CHAIRMAN. Pursuant to House Resolution 1257, the gentleman from Tennessee (Mr. GORDON) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from Tennessee.

Mr. GORDON of Tennessee. Madam Chairman, I also support this amendment, and I want to thank the gentleman from Iowa for his attention to the important issue of tornado research.

Tornadoes and tornado-force winds present serious hazards to life and property in the United States. We've already had ample and tragic evidence in recent days of the devastation that can be wreaked by these terrible storms. We need to do all that we can to improve our understanding of tornadoes and learn how to better predict them.

The National Oceanic and Atmospheric Administration has the lead responsibilities for addressing tornado-prediction issues. However, NASA has existing cooperative activities with NOAA that may contribute to greater progress in this effort. NASA's existing cooperative activities with NOAA on facilitating research and data sharing are important to improving our understanding of tornadoes. I agree with Mr. BRALEY that the work that NOAA and NASA are doing related to tornadoes needs to be given a high priority.

That is the objective of this amendment. It is just common sense that we ensure that any relevant work that NASA and NOAA are collaborating on is given the attention and priority it needs to improve our Nation's ability to predict tornado events.

I thank the gentleman from Iowa for his initiative for this amendment, and I urge my colleagues to support it.

I reserve the balance of my time.

Mr. FEENEY. Madam Chairman, I rise to claim the time in opposition, although I'm not necessarily opposed.

The CHAIRMAN. Without objection, the gentleman from Florida is recognized for 5 minutes.

There was no objection.

Mr. FEENEY. This really is an amendment that we're enthusiastic about. NASA currently conducts weather research in cooperation with NOAA, although through the U.S. Weather Research Program, the gentleman's amendment emphasizes the importance of this research as we cope with predicting and dealing with the aftermath of violent weather systems.

It's a terrific amendment, and with that, I would urge its support.

I yield back the balance of my time.

Mr. GORDON of Tennessee. Madam Chairman, I yield such time as he may consume to the chairman of the Subcommittee on Space and Aeronautics, the gentleman from Colorado (Mr. UDALL).

Mr. UDALL of Colorado. Madam Chairman, I strongly support this amendment.

Tornadoes cause an average of 54 fatalities and 1,500 injuries in the United States each year. Just last month in my home State of Colorado, tornadoes devastated the town of Windsor in Colorado destroying more than 100 homes and causing one death. Predicting tornado intensity and location is critical to protecting lives and property, and we must do all we can to improve our knowledge in this important area.

I'm proud to say that the research at NOAA's Earth System Research Laboratory in my district, the Second District in Colorado, contributes to this better understanding and improved forecasts of tornadoes. This amendment will further involve NASA scientists and data in this important process.

I would urge Members to support this amendment just like the chairman did.

Mr. LATHAM. Madam Chairman, I rise today in support of Congressman BRALEY's amendment and to express my deepest sympathies to all my fellow Iowans affected by the tornados that recently tore through Iowa. It is my hope the intense grief felt by those suffering from the sudden loss of a loved one will be lifted, even for a moment, by the prayers of hope from strangers.

For those of us who have the privilege of living in America's heartland, severe weather is nothing new. Tornados are a seasonal reality we all live with. But, when disaster strikes and takes the lives of our friends and neighbors—we are never prepared to witness the power of Mother Nature and the tragedies she can leave in her wake.

Through the tears and sense of disbelief, Iowans again have pulled together to help friends, family and strangers in need. Over the years, I have had the misfortune of viewing many communities damaged by storms. Earlier this week I toured the flood ravaged parts of my district. The scenes painted by wind and water are heartbreaking, but it never ceases to amaze me how quickly Iowans show their true mettle by bringing hope and strength to their towns.

I know for many Members of Congress, tornados rarely, if ever, affect your communities. When you see the astonishing videos of storms and the aftermath, I ask that you take a moment and think about our first responders and the people who find themselves in need. We must take every step possible to prevent and prepare for disasters like the State of Iowa has experienced in recent weeks. This amendment will go a long way towards that important goal.

Our thoughts and prayers are with Iowa and I urge my colleagues to support this amendment.

Mr. BRALEY of Iowa. Madam Chairman, I am in strong support of my amendment that will help improve our ability to forecast deadly tornadoes. I regret my absence today to speak and vote in favor of this amendment. However, I have had to return to Iowa due to major flooding in my district. I would like to thank Chairman GORDON for offering this amendment today in my absence.

In the last three weeks, 12 people have lost their lives in Iowa due to tornadoes. On May 25, parts of my district in northeastern Iowa were hit by an EF–5 tornado with winds of up to 205 miles per hour. Eight people died, and over 70 people were injured due to this tornado, which was the strongest to hit Iowa in 32 years. Just yesterday, a tornado ripped through a Boy Scout camp in Harrison County killing 4 Boy Scouts and injuring 48 people. My thoughts and prayers go out to the Boy Scouts, their family members, friends and all those affected by this devastating tornado in western Iowa. I hope that all of those injured in the western Iowa tornado make a speedy recovery so that they can continue on with their lives.

It is clear that the destruction caused by this tornado would have resulted in more injuries and lives lost had it not been for the warning sirens that went off before the tornado hit. Those warning sirens gave most people the time needed to evacuate and take shelter. However, this warning was, unfortunately, not enough to ensure the safety of every person in the path of these deadly storms.

I'm offering this amendment today to ensure that NASA is actively pursuing research opportunities to accurately predict and forecast tornadoes. My amendment would require NASA to cooperatively work with the National Oceanic Atmospheric Administration, NOAA, on tornado research. NOAA is actively involved in tornado research at its Storm Prediction Center in Norman, Oklahoma, and coordination between these agencies could

prove very beneficial. At the Prediction Center, NOAA is studying ways to improve the prediction and location of tornadoes.

I believe that NASA has a lot of valuable technology and input to offer on the study of tornadoes. However, it seems that NASA has done very little work with NOAA on this important life saving research. My amendment will give NASA and NOAA the opportunity to find ways to work cooperatively on tornado research which will help us accurately predict these deadly storms.

My amendment would also require NASA to make any existing cooperatives with NOAA on tornado research a high priority. In the past, NASA has proven that they have a lot to offer with tornado research. Their past work with NOAA on the Tropical Rainfall Measuring Mission satellite has shown us that sudden increases in lightning in strong super-cell thunderstorms can increase the chances of a tornado touchdown. NASA must commit more resources to this program and other programs dealing with tornado research. Committing more resources to already existing programs will help us accurately forecast tornado touchdown locations.

I urge the House to adopt this amendment to give NASA a better opportunity to offer its technology and expertise in the area of tornado research, and to improve and provide additional resources to its already existing tornado research programs.

Mr. GORDON of Tennessee. Madam Chairman, I yield back the balance of my time.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Tennessee (Mr. GORDON).

The amendment was agreed to.

The CHAIRMAN. The Committee will rise informally.

The Speaker pro tempore (Mr. YARMUTH) assumed the chair.

ENROLLED BILLS SIGNED

Ms. Lorraine C. Miller, Clerk of the House, reported and found truly enrolled bills of the House of the following titles, which were thereupon signed by the Speaker:

H.R. 3179. An act to amend title 40, United States Code, to authorize the use of Federal supply schedules for the acquisition of law enforcement, security, and certain other related items by State and local governments.

H.R. 3913. An act to amend the International Center Act to authorize the lease or sublease of certain property described in such Act to an entity other than a foreign government or international organization if certain conditions are met.

H.R. 6124. An act to provide for the continuation of agricultural and other programs of the Department of Agriculture through fiscal year 2012, and for other purposes.

The SPEAKER pro tempore. The Committee will resume its sitting.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT OF 2008

The Committee resumed its sitting.

AMENDMENT NO. 10 OFFERED BY MR. HODES

The CHAIRMAN. It is now in order to consider amendment No. 10 printed in House Report 110–707.

Mr. HODES. Madam Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 10 offered by Mr. HODES:

In title XI, add at the end the following new section (and amend the table of contents accordingly):

SEC. 1109. CHRISTA MCAULIFFE SCHOLARSHIP PROGRAM FOR FIELDS RELATED TO THE MISSION OF NASA.

The Administrator shall establish a scholarship program in honor of Christa McAuliffe, who died in the 1986 Challenger Space Shuttle Disaster. The scholarship fund would provide scholarships each year of $10,000 each to three women who are going to college to study in fields related to the mission of NASA, with the goal of seeking careers in space science, aeronautics, and other fields related to NASA.

The CHAIRMAN. Pursuant to House Resolution 1257, the gentleman from New Hampshire (Mr. HODES) and a Member opposed each will control 5 minutes.

The Chair recognizes the gentleman from New Hampshire.

Mr. HODES. Madam Chairman, I yield myself such time as I might consume.

This amendment will honor a fallen hero from New Hampshire who was beloved by the Nation. Christa McAuliffe was a teacher from Concord, New Hampshire, who achieved national fame for being the first educator selected to go into space. To those who knew her at home and loved her, she was a social studies teacher who touched the lives of hundreds of New Hampshire's children.

When she was selected by NASA to join the 1986 Challenger Crew, she touched a chord with all of the American people. They saw her dedication to teaching and learning. She believed in helping our children succeed. She often said, I touch the future. I teach.

Even though her life was cut tragically short when the Challenger exploded, her message about shaping our Nation's future through education and exploration is the reason we are here today to consider this important measure.

This amendment will provide three scholarships for women to pursue degrees in science and other fields related to NASA's mission. Christa always dreamed of going into space, and today we can create the opportunity for more women to fulfill their dream of one day being able to journey into space and pursue careers in science, mathematics, and other science-related fields.

These scholarships honor Christa McAuliffe, they honor her dream and are a fitting tribute to her great sacrifice.

Madam Chairman, I urge passage of this amendment.

I reserve the balance of my time.

Mr. FEENEY. Madam Chairman, I rise to claim the time in opposition, although I'm not necessarily opposed.

The CHAIRMAN. Without objection, the gentleman from Florida is recognized for 5 minutes.

There was no objection.

Mr. FEENEY. Again, this is an amendment we enthusiastically support. NASA does a great deal to incentivize education programs for women engineers and scientists, but a lot of us Americans remember exactly where we were the moment that Ms. McAuliffe and her colleagues perished. It reminds all of us that human space flight is an inherently risky venture and especially for teachers throughout America and school children who were contemporaries of the Challenger disaster.

I think the gentleman's amendment makes a really good point and with that, I would support the amendment and urge its adoption.

I yield back the balance of my time.

Mr. HODES. Madam Chairman, I thank the gentleman for his kind and heartfelt remarks.

At this time, Madam Chairman, I yield 1 minute to my colleague from Colorado (Mr. UDALL).

Mr. UDALL of Colorado. Madam Chairman, I want to thank the gentleman from New Hampshire for yielding to me.

I'm pleased to support this amendment as co-chair of the STEM Education Caucus along with my colleague, Dr. EHLERS, from Michigan. We've long worked to create emphasis on science and math education programs. These areas of study are critical to our future economic competitiveness as well as to the future of our space program.

It is very appropriate to honor the life of educator and astronaut Christa McAuliffe with this scholarship program.

I'm proud to support this amendment and urge all my colleagues to support it.

Mr. HODES. I thank the gentleman.

I yield back the balance of my time.

The CHAIRMAN. The question is on the amendment offered by the gentleman from New Hampshire (Mr. HODES).

The question was taken; and the Chairman announced that the ayes appeared to have it.

Mr. HODES. Madam Chairman, I demand a recorded vote.

The CHAIRMAN. Pursuant to clause 6 of rule XVIII, further proceedings on the amendment offered by the gentleman from New Hampshire will be postponed.

AMENDMENT NO. 11 OFFERED BY MR. YARMUTH

The CHAIRMAN. It is now in order to consider amendment No. 11 printed in House Report 110–707.

Mr. YARMUTH. Madam Chairman, I offer an amendment.

The CHAIRMAN. The Clerk will designate the amendment.

The text of the amendment is as follows:

Amendment No. 11 offered by Mr. YARMUTH: