FOREIGN RELATIONS
of the Senate ON CONSIDERATION OF THE FEBRUARY 23, 2006, REPORT OF THE SELECT COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

Mr. BURR. Mr. President, I ask unanimous consent that the Committee on Homeland Security and Governmental Affairs be authorized to meet on Wednesday, September 28, 2005, at 2:30 p.m. in Room 485 of the Russell Senate Office Building to conduct an oversight hearing on Homeland Security.

The PRESIDING OFFICER. Without objection, it is so ordered.

COMMITTEE ON INDIAN AFFAIRS

Mr. BURR. Mr. President, I ask unanimous consent that the Committee on Indian Affairs be authorized to meet on Wednesday, September 28, 2005, at 3:30 p.m. in Room 485 of the Russell Senate Office Building to conduct an oversight hearing on Indian Housing.

The PRESIDING OFFICER. Without objection, it is so ordered.

COMMITTEE ON THE JUDICIARY

Mr. BURR. Mr. President, I ask unanimous consent that the Committee on the Judiciary be authorized to meet to conduct a hearing on "Protecting Copyright and Importation in a Post-Grokster World" on Wednesday, September 28, 2005, at 9:30 a.m. in the Dirksen Senate Office Building Room 226.

Witness List


Panel II: Marty Roe, Lead Singer, Diamond Rio, Nashville, TN; Cary Sherman, President, Recording Industry Association of America, Washington, DC; Gary Shapiro, President and Chief Executive Officer, Consumer Electronics Association, Arlington, VA; Mark Lemley, William H. Neukom, Professor of Law, Stanford University Law School and Director Stanford Program in Law, Science and Technology, Stanford, CA; Ali Aydar, Chief Operating Officer, SNOCAP, San Francisco, CA; and Sam Yagan, President, MetaMachine, Inc. (developer of eDonkey and Overnet) New York, NY.

The PRESIDING OFFICER. Without objection, it is so ordered.

SUBCOMMITTEE ON PUBLIC LANDS AND FORESTS

Mr. BURR. Mr. President, I ask unanimous consent that the Subcommittee on Public Lands and Forests be authorized to meet during the session of the Senate on Wednesday, September 28, at 2:30 p.m. in Room 485 of the Russell Senate Office Building.

The purpose of the hearings is to review the Grazing programs of the Bureau of Land Management and the Forest Service, including proposed changes to grazing regulations, and the status of grazing permit renewals, monitoring programs and allotment restocking plans.

The PRESIDING OFFICER. Without objection, it is so ordered.

PRIVILEGE OF THE FLOOR

Mr. BROWNBACK. Mr. President, I ask unanimous consent that Joanna Mihok, a legal intern on my Judiciary Committee staff, be granted floor privileges for the duration of the consideration of Judge John Roberts to be Chief Justice of the United States.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. HARKIN. I ask unanimous consent that Elizabeth Leef of my staff be granted the privilege of the floor for the duration of today’s session.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. NELSON of Nebraska. Mr. President, I ask unanimous consent that Valerie Frias and Katherine Hutchinson, two Judiciary Committee staffers, be granted floor privileges for the duration of the debate on the nomination of John G. Roberts to be Chief Justice of the United States.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. GRASSLEY. First, I ask unanimous consent that Matt Reisetter of my staff be granted the privilege of the floor for the remainder of the debate on the nomination of Judge Roberts.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. GRAHAM. Mr. President, I ask unanimous consent that Matt Reisetter of my staff be granted the privilege of the floor for the duration of the debate on the nomination of Judge Roberts.

The PRESIDING OFFICER. Without objection, it is so ordered.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT OF 2005

Mr. GRAHAM. Mr. President, I ask unanimous consent that the Senate proceed to the immediate consideration of Calendar No. 174, S. 1281.

The PRESIDING OFFICER. The clerk will report the bill by title. The legislative clerk read as follows:


There being no objection, the Senate proceeded to consider the bill which had been reported from the Committee on Commerce, Science and Transportation with amendments.

(Strike the parts shown in black brackets and insert the parts shown in italic.)

Mrs. HUTCHISON. Mr. President, I am delighted to join my friend and colleague, the distinguished Senator from Florida, in bringing before the Senate today, S. 1281, the NASA Authorization Bill of 2005. Our subcommittee and the full Commerce Committee have worked hard to prepare legislation that we believe is important and timely, because it comes at a watershed moment in this Nation’s civil space program.

That moment has come at no small cost. It grew out of a terrible tragedy that took place in the skies over Texas 2½ years ago, when the space shuttle Columbia and her brave crew were lost as they were returning home from an important and successful research mission.

In the aftermath of that accident, we were forced, as a nation, to once again confront the question of the value of space exploration in the face of the risks involved in sending our best and brightest—and those of other nations who are our partners in space exploration—into the hostile realm of space. The overwhelming and resounding answer, from the families of those who were lost to men, women and children across the country, and our elected leadership, was "yes." They gave the same answer that Lewis and Clark gave to Thomas Jefferson 200 years ago, when he charged them with the task of exploring what was then a large, largely unknown expanse.

It was that difficult but inspiring voyage of discovery opened the way for this Nation to spread its wings from sea to sea, the voyages of discovery into the far reaches of space have begun—and will continue—to open vast opportunities for our Nation, and for the world.

While the vision that drove Lewis and Clark—the discovery of a north-west passage to the Pacific Ocean—was not the result they achieved, the understanding of the world that Lewis and Clark brought home, and the insights into themselves and their fellow human beings provided a wealth of discovery more diverse and more valuable than any specific goal they had in mind as they set off across the country to spread its wings from sea to sea.

Among the many important findings of the investigation into the Columbia accident was the need for a renewed guiding vision for our human space exploration programs. On April 14, 2004, President George W. Bush provided the essence of that bold new vision for exploration, not only for NASA, but for the Nation. It extends far beyond his tenure in office—beyond the tenure of most of us serving in the Senate today. It reaches beyond many years and ultimately millions of miles into the solar system in which we live.

It will require a long-standing commitment by this Nation, and it will not be an easy vision to achieve. We will find unexpected obstacles and challenges along the way. If we didn’t, it would not really be exploration. Our task as a nation, and in the company of international partners who will join us on this journey, will be to meet those challenges and turn them into opportunities.

The essential first step in the new Vision for Exploration was to return the space shuttle to flight. As we all know, the space shuttle was just released into orbit and began this Nation’s return to space flight on July 26th. Commander Eileen Collins and her crew,
the crew aboard the International Space Station, and the entire NASA team conducted an extremely successful first test flight to assess the progress made in the space shuttle program since the tragic Columbia accident. We now witness the space shuttle program—the first and the last—the Space Shuttle, and the entire NASA space station represents an immensely important scientific information resulting from the research the expedition crews aboard the ISS have been able to accomplish. And most of its laboratory facilities are not yet on orbit. The space station represents an immensely valuable asset for this Nation and our international and scientific partners, and the legislation before the Senate today will serve to ensure it realizes the vast potential it has long promised.

The past 5 years have seen other changes. As we have undergone the recovery from the Columbia accident, we have witnessed the most comprehensive review of the hardware, systems and processing for the space shuttle program since the launch operational flights 24 years ago. While we may never be able to completely eliminate the risks of human spaceflight, the space shuttle system is safer today than it has ever been, and we have learned valuable lessons that can be applied to the next generation of human space flight vehicle.

Last year we witnessed dramatic evidence of yet another major change in the realm of space exploration. On October 4, Brian Binnie at the controls of SpaceShipOne, built by theScaled Deposits Corporation, over 100 kilometers high, to become the first person to fly a privately-built vehicle into the reaches of space on September 29, 2004. Five days later, on October 4, during liftoff—the direct cause of the damage to Columbia—was reduced to a level far below that previously experienced, it has not been eliminated and more work remains to understand and address the problem. For example, among the major improvements in the Shuttle program is the vast increase in the ability to monitor and collect visual information on the health of the Orbiter both during launch and in orbit. That unprecedented level of information was combined with new on-orbit repair techniques to further enhance our confidence in the shuttle program’s flight readiness. All of us, I’m sure, were thrilled to watch astronaut Steve Robinson deftly pluck the small pieces of foam debris from Discovery’s undersides, and the amazing never before seen images of the orbiter’s thermal protection system. Our subcommittee will continue to monitor the application of the findings of this first test flight and preparations for the launch of the second test flight next year, which continues this first step in the Vision for Exploration.

The legislation we bring before the Senate today supports the Vision of Exploration outlined by the President. It provides an opportunity for the Congress to fulfill its responsibility to help set the stage for the commencement of our new national journey of exploration. It has been 5 years since the Congress has enacted authorization legislation for NASA and its programs. Those 5 years have seen a great deal of change in the realm of space exploration. First and foremost, for nearly all of that time, humans have been living and working continuously for 240 miles above the earth aboard the International Space Station. Despite the interruption of its assembly by the Columbia accident, the space station has already provided a great deal of important scientific information resulting from the research the expedition crews aboard the ISS have been able to accomplish. And most of its laboratory facilities are not yet on orbit. The space station represents an immensely valuable asset for this Nation and our international and scientific partners, and the legislation before the Senate today will serve to ensure it realizes the vast potential it has long promised.

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Over the past 17 years, this Chamber has been the scene of vigorous discussion and debate on the International Space Station, long before the first module was launched in November of 1998. Through all that discussion, the central theme of those of us who supported the space station and two-thirds of us consistently supported it in the votes following those debates—was that the ISS represents a unique laboratory in space, which holds the promise for scientific findings that can directly benefit us on Earth and it is interesting to hear statements that the space station has not fulfilled that promise. Those who suggest that seem to have forgotten that it is not yet completed. In fact, only one of the three planned laboratories is on orbit now—the US Destiny laboratory—and it is not yet fully equipped. The remaining modules are completed, and are at the Kennedy Space Center, awaiting their launch and outfitting so that the long-standing plans for ISS re-supply can finally come to fruition. Our international partners have invested far too much in building and preparing those facilities, and the on-orbit structure that will provide their home and supporting power and crew accommodations, to back away from that investment now. To do so would not only represent a wasteful, irresponsible and inexcusable breach of faith with the American taxpayers, but an unconscionable betrayal of scientists and researchers in a wide array of disciplines who have invested years of effort and resources preparing to conduct research that can only be done in the microgravity of space.

This bill affirms our commitment to fulfill the promise of the ISS. We recognize that NASA has limited total resources and that has been given an enormous task to lead the Vision for Exploration. The demands of many valuable and important existing programs have forced NASA to make difficult choices in focusing their scarce resources, which support the goals of the Vision. We understand that reality, and have attempted in this 5-year reauthorization bill to provide a stable, consistent and moderately increasing level of funding to enable NASA to address those challenges.

At the same time, we have encouraged, as I noted earlier, the increased participation and involvement of commercial interests and capabilities, in a way that can relieve NASA of some of the basic burdens of space operations. With respect to space station research, we believe additional steps must be taken to enable NASA to conduct the research it must to support long-duration human spaceflight, and to return to the Moon, and subsequent to Mars, which are our ultimate goals. And it is interesting to hear statements that the space station has not fulfilled that promise. Those who suggest that seem to have forgotten that it is not yet completed. In fact, only one of the three planned laboratories is on orbit now—the US Destiny laboratory—and it is not yet fully equipped. The remaining modules are completed, and are at the Kennedy Space Center, awaiting their launch and outfitting so that the long-standing plans for ISS re-supply can finally come to fruition.
International Space Station as national laboratory facility. It further directs the NASA Administrator to develop a plan, within one year after enactment of the bill, to establish a ground-based national laboratory structure that will be responsible for maintaining and operating the research capabilities in the on-orbit laboratory facilities. The ISS national laboratory will be empowered to establish scientific—and funding—relationships with other governmental and non-governmental entities and to include international participation as well. The infusion of new participants and non-NASA resources will free NASA of much of the financial burden it would require to sustain broad-based research aboard ISS, and would thus enable it to focus its ISS research, as planned, on those disciplines and experiments which directly support the needs of the Vision for Exploration.

We believe this represents a creative and productive approach to meeting our international commitments and fulfilling the long-standing research promise of the ISS, while not inhibiting NASA’s pursuit of its exploration objectives.

In order to continue the Nation’s exploration activities, both in continuing essential activities in low-Earth orbit and moving outward, back to the Moon, Mars, and beyond, we must have a new generation of launch and flight vehicles. The Vision for Exploration calls for the development of a new crew exploration vehicle and associated launch systems, to meet that objective.

As I have stated, this legislation supports the goals and objectives of the Vision for Exploration. As the saying goes, however, sometimes “the devil is in the details.” As those details have been revealed in the planning to implement the vision, I have expressed concerns about some of the early transitional steps NASA’s transition from low-Earth orbit to exploration of the Moon and Mars. I have already addressed the question of ensuring the maximum use of the International Space Station. My other primary concern has to do with the transition from the Space Shuttle to the new crew exploration vehicle. The initial announcement of the Vision for Exploration called for the termination of Shuttle flights in 2010, and the first flight of the new exploration space vehicle was projected for 2014. The resulting 4-year hiatus in this Nation’s ability to launch humans into space was simply unacceptable to me. It would represent a serious degradation of our national and economic security, as the community of spacefaring nations expands with the advent of Chinese human spaceflight capability and the potential of even more nations developing such capability, potentially challenging U.S. leadership in this important strategic area and major engine of technological advancement.

S. 1281, as introduced, stated that uninterrupted U.S. spaceflight capability is essential to our Nation, and required, in Section 202 of the bill, that the Space Shuttle Orbiter not be retired until a replacement crew-capped space vehicle be made operational. NASA’s new Administrator, Dr. Michael Griffin, testified at his confirmation hearing before the Commerce Committee, and again in a subsequent subcommittee hearing on the space shuttle, that he shared our concern about a lengthy hiatus period in U.S. spaceflight capability. Since assuming the leadership of NASA, he has undertaken an effort to approach the development of the replacement vehicle in such a way as to close that gap as much as possible. In anticipation of the success of those efforts, Senator NELSON and I agreed to a modification of the language in the bill—including in the manager’s amendment to the bill—which provides some flexibility in meeting the goal of uninterrupted U.S. spaceflight capability, but continues to state it as an objective. The Exploration Systems Architecture Study was recently completed and I am very pleased to say that the results track very closely to the provisions of S. 1281. The CEV development would be accelerated from 2015 to 2011 by moving its operational date to 2011. The key to CEV acceleration is largely a question of resources, and sufficient funding could enable an even earlier operational date, possibly closing the potential gap in spaceflight capability altogether.

In Dr. Griffin’s appearance before the Science and Space Subcommittee during our hearing on the space shuttle program, he pointed out that the plan for space shuttle retirement involves the retirement of the Orbiters, not necessarily the additional components that make up what we call the space shuttle. Those additional components are the solid rocket boosters and the external tank. I remind my colleagues that the Orbiter is a vehicle that has two major spaceflight functions combined in a single vehicle: the delivery of crew to and from orbit, and the delivery of cargo, or payloads, to and from orbit. The future developments of U.S. human spaceflight capability are intended to separate those functions. That will enable the development of much more simplified—and arguably safer and less costly—vehicles to serve each separate function. The provisions of S. 1281—coupled with the revised plans for vehicle development recently announced, will fulfill those objectives using major elements of our existing systems and adapting them to meet the requirements of both manned and unmanned launch systems.

Launch vehicles and spaceflight vehicles do not prepare and launch themselves into orbit or maintain themselves entirely independently while in space. They require ground-based support facilities, institutions and skilled personnel. The maintenance of those capabilities are, in fact, the most labor and resource-intensive elements of a spaceflight program, over time. They must be maintained even when the vehicles themselves are not flying, and must be kept in a high state of readiness for uncrewed, human spaceflight systems, especially, that the expected readiness are fundamental elements of flight safety.

The non-orbiter elements of the space shuttle program, both in flight hardware and ground support, represent an enormous national asset and, with modifications and reengineering, can potentially be adapted to meet—in separate configurations—the requirements for human spaceflight and for the launch of large, heavy payloads. Those large payloads are beyond the reach of either evolved expendable launch vehicles or privately-developed launch vehicles—or the current or planned launch vehicles of any other nation—for that matter. For those reasons, and others, this legislation directs and encourages NASA to make the maximum possible utilization of the personnel, assets and capabilities of the space shuttle program in developing the next generation of crew and cargo vehicles. NASA plans will do just that, as envisioned by this legislation.

Another important and historical NASA research activity is aeronautics—a fundamental part of NASA’s activities since its inception. Indeed, not only is “aeronautics” the first “a’” in NASA, but NASA came into being as an expansion of the National Advisory Committee on Aeronautics, which was established in 1915. That heritage is an important NASA legacy and the continued health of the Nation’s aerospace industry in a very competitive global market-place makes it essential that our Nation have solid aeronautical research capabilities. Equally important in the environment of limited resources, is that decisions about priorities for funding and programs be guided by a clear statement of policy, based on a thorough understanding of both available assets and essential requirements. This legislation directs the development of a national policy to guide the Nation’s aeronautical research—including that conducted by NASA. The policy is to be developed within one year after enactment of this legislation, and provide time for a thorough and complete assessment of every aspect of aeronautics research, and yet provide the earliest possible guidance for both the administration and the Congress in determining the appropriate funding levels for U.S. aeronautics. We have chosen not to establish a specific level of funding for that research in the legislation, in order to provide the flexibility for the NASA Administrator to establish those levels using the national policy guidance we have required to be developed.

Finally, let me say something about the broad range of science activities
for which NASA has always been known. The remarkable feat of the Deep Impact asteroid interception mission and the extraordinary success of the Spirit and Opportunity Mars Rovers are, of course, only the most recent and dramatic achievements of NASA's Science expertise. Less spectacular, but equally significant, are the earth observation and earth sciences programs which help us understand—and better care for—the spaceships of which all of us are members. There is a good balance between the disciplines, providing flexibility for the NASA Administrator to make the best judgments about resource allocations. However, we express clearly in this bill the need for maintaining a balanced science portfolio.

In addition, we require accountability and will maintain careful oversight over the plans and decisions made to implement that balance.

This legislation provides a comprehensive, looking and responsible approach to the transition of our Nation’s space exploration programs into a new era of discovery. I believe that, together with our colleagues in the other body, we will be able to craft a bipartisan consensus that will help ensure this Nation’s leadership in space exploration and provide benefits beyond measure and beyond imagination to this Nation and the world.

I want to thank my friend and colleague from Florida, Senator Nelson, for the spirit of cooperation he and his staff have brought to the development and refinement of this legislation. It represents a truly bi-partisan—really a non-partisan—result, as is appropriate for the Nation’s space exploration programs. I also want to express my appreciation to the staff of my Subcommittee and the full Commerce Committee, who have worked hard to bring this measure before the Senate.

And, of course, I want to acknowledge the leadership of Senators Stevens and Inouye, who have supported our efforts to provide authorization and a strong policy foundation to our Nation’s space exploration efforts.

I urge my colleagues to support S. 1281.

Mr. Nelson of Florida. Mr. President, I am pleased to join Senators Hutchison, Stevens, Inouye, and Lott today in sponsoring an amended Senate Authorization Act and managers package that provides policy guidance for keeping NASA on track to achieve their stated goals and to ensure that there is a good balance between the different activities that NASA performs.

Just a few days ago, NASA released their Exploration Systems Architecture Study. The study describes how NASA plans to implement the President’s Vision for Space Exploration by returning to the Moon and preparing to go beyond.

Through this NASA bill, Congress can provide constructive support to the work being done by Administrator Michael Griffin, as they begin to implement the President’s vision and prepare NASA for the challenges of the future. This is a 5-year bill, authorizing NASA from 2006 through 2010. It authorizes NASA appropriations in excess of the President’s budget request.

For fiscal year 2006, the President requested $16.456 billion, which is a 2.4 percent increase over the fiscal year 2005 NASA operating budget. Recently the Commerce, Justice, and Science Appropriations Subcommittee provided $16.556 billion for NASA. This bill authorizes $16.556 billion for fiscal year 2006, which is a 3 percent increase over the fiscal year 2005 NASA operating budget. This bill authorizes increases at a level of about 3 percent each year, consistently providing more than the President’s budget projection.

Like many of our colleagues, Senator Hutchison and I believe that recent NASA budget requests have been below the levels necessary for NASA to perform its various missions effectively. Once this bill is enacted, we intend to work with the Appropriations Committee to ensure that adequate funds are provided for NASA to succeed.

This legislation authorizes NASA to return humans to the Moon, to explore it, and to maintain a human presence on the Moon. Consistent with the President’s vision, it also requires using what we learn and develop on the Moon as a springboard to future exploration of Mars.

To carry out these missions, our bill requires NASA to develop an implementation plan for the transition from shuttle to crew exploration vehicle, CEV. The plan will help NASA to make a smooth transition from retirement of the space shuttle orbiters to the replacement spacecraft systems. The implementation plan will help make sure that we can keep the skills and the focus that are critical and that each space shuttle flight is safe through retirement of the orbiters, and to retain those personnel needed for the CEV and heavy-lift cargo spacecraft.

It is essential to our national security that we prevent any hiatus or gap in which the United States cannot send astronauts to space without relying on a foreign country. The Russians have been a major part of construction of the International Space Station, and the Soyuz spacecraft has been a reliable vehicle for our astronauts. But with all of the uncertainties in our relationship with Russia, we simply cannot take for granted that we will have the advantage of being totally dependent on the Soyuz. We need to maintain assured access to space by U.S. astronauts on a continuous basis. We therefore require in this legislation, that there not be a hiatus in space flight capability during the transition between the space shuttle orbiters and the availability of the next generation U.S. human-rated spacecraft.

We have worked with NASA to address their concerns regarding the hiatus, and have crafted language that expresses our desire not to have a gap, and that NASA feels is suitable. We are aware of Dr. Griffin’s efforts to reduce the size of the US capsule to accommodate a reduction in the Soyuz crew, and we appreciate the work that he is doing to accelerate the crew exploration vehicle.

Our bill directs NASA to plan for and consider a Hubble servicing mission after the Space Shuttle Return to Flight missions have been completed.

Americans are inspired by the images that Hubble produces. The new instruments to be added during the SM-4 Hubble servicing mission will produce higher quality images; enable us to see further into space; and give scientists a better understanding of our universe’s past, and perhaps of our future. The replacement gyroscopes and batteries that are planned for the mission will extend the Hubble Telescope’s life by 5 or more years.

This NASA authorization bill calls for utilization of the International Space Station for basic science as well as exploration science. It is important that we reap the benefits of our multi-billion dollar investment in the Space Station. The promise of some basic science research requires a micro-gravity or a space environment for us to better understand the problem that we are trying to solve. This bill ensures that NASA will maintain a focus on the importance of basic science.

In order to assure that we can meet our obligations with respect to the Space Station, the administration has proposed that Congress should enact theExtension of the Iran Nonproliferation Act to assure that we can continue to cooperate with the Russian Federation in this area. There may be periods when our only access to the Space Station will be through the Russian Soyuz spacecraft. But Russia’s failure to cease all proliferation activities with respect to Iran has resulted in sanctions against Russia that would preclude such cooperation.

This bill directs NASA to improve its safety culture. According to the Columbia Accident Investigation Board, CAIB, report, the safety culture at NASA was as much a cause of the Columbia tragedy as the physical cause. Low- and mid-level personnel felt that they could not raise safety concerns without reprisals, or being ignored. NASA has already taken significant steps to address these problems, but we need to assure that the safety culture improves as quickly as possible and that it continues to improve.

This legislation proposes that the Aerospace Safety Advisory Panel monitor and measure NASA’s improvements to their safety culture, including the implementation of any provisions for voicing concerns about safety.

It also contains policy regarding NASA’s need to consider and implement lessons learned, in order to avoid another preventable tragedy like the Challenger and Columbia disasters.
have stated their intent to dominate the airplane market by 2020. It is not in our national interest to let that occur.

We are calling on NASA to develop and demonstrate aviation technologies for reducing commercial aircraft noise levels at airports, making aircraft more fuel efficient, improving airport safety and security, and continuing the pursuit of revolutionary concepts such as hypersonic flight. Aeronautics is a very important function of NASA and needs to be continued and further developed. This bill calls on NASA to assure that at least 5 percent of the aeronautics budget is allocated for fundamental aeronautical research.

NASA has a new direction, and they have outstanding leadership in Dr. Michael Griffin.

We have an opportunity to authorize NASA for: implementing the Vision for Space Exploration; renewing our commitment to U.S. aviation and NASA aeronautics research; retaining or resuming very important science activities at NASA; and assuring that America has continuous human access to space.

By passing this legislation, we will continue to advance our national security, expand our economy, inspire the next generation of explorers, and fulfill our destiny as explorers.

Mr. STEVENS. Mr. President, passage of S. 1281, the NASA Authorization Act of 2005, is a milestone in our country’s continuing efforts to open and develop new frontiers.

One year after the Columbia space shuttle tragedy, President Bush gave us a bold, new vision for the future of space exploration. This legislation provides the framework we need to implement the President’s vision.

The Moon is the strategic gateway to the rest of the solar system. It will ultimately be a critical point for many human endeavors. It will support economic growth, cutting-edge research and technology, and innovative partnerships.

This legislation also provides NASA with important guidance for its other missions. It outlines a national aeronautics policy, which will be developed by the administration. This policy will enable us to take into account emerging challenges in aeronautics research as we plan our investments going forward.

S. 1281 also calls for the implementation of a balanced science space program and highlights the need for better access to data which can meet local and national challenges.

This is a bipartisan bill which provides a solid foundation for our current and future space activities. I am pleased we are sustaining our long-standing commitment to space exploration.

Mr. GRAHAM. I ask unanimous consent that the Hutchison amendment at the desk be agreed to; the committee reported amendments, as amended, if amended, be agreed to; the bill, as amended, be read a third time and passed; the motions to reconsider be laid upon the table; and that any statements relating to the bill be printed in the RECORD.

The PRESIDING OFFICER. Without objection, it is so ordered.

The amendment (No. 1875) was agreed to.

The committee amendments were agreed to.

The bill (S. 1281), as amended, was read the third time and passed, as follows:

S. 1281

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

SEC. 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as ‘‘National Aeronautics and Space Administration Authorization Act of 2005’’.

(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. 2. Findings.
Sec. 2. Findings.
Sec. 2. Findings.

TITLE I—AUTHORIZATION OF APPROPRIATIONS

SUBTITLE A—AUTHORIZATIONS

Sec. 102. Fiscal year 2007.
Sec. 103. Fiscal year 2008.
Sec. 104. Fiscal year 2009.
Sec. 105. Fiscal year 2010.
Sec. 106. Evaluation criteria for budget reprogramming.

SUBTITLE B—GENERAL PROVISIONS

Sec. 131. Implementation of a science program that extends human knowledge and understanding of the Earth, sun, solar system, and the universe.
Sec. 132. Biennial reports to Congress on science programs.
Sec. 133. Status report on Hubble Space Telescope servicing mission.
Sec. 134. Develop expanded permanent human presence beyond low Earth orbit.
Sec. 135. Ground-based analog capabilities.
Sec. 136. Space launch and transportation transition capabilities, and development of advanced space and aeronautical technologies.
Sec. 137. National policy for aeronautics research and development.
Sec. 138. Identification of unique NASA core aeronautics research.
Sec. 139. Lessons learned and best practices.
Sec. 140. Safety management.
Sec. 141. Creation of a budget structure that aids effective oversight and management.
Sec. 142. Earth observing system.
Sec. 143. NASA Earth exploration program.
Sec. 144. Assessment of extension of data collection from Ulysses and Voyager spacecraft.
Sec. 145. Program to expand distance learning in rural underserved areas.
Sec. 146. Institutions in NASA’s minority institutions program.
Sec. 147. Aeronautics education program.
Sec. 148. Atmospheric, geophysical, and rocket research authorization.
Sec. 149. Orbital debris.
Sec. 150. Continuing funding of certain educational programs.
Sec. 151. Establishment of the Charles ‘‘Pete’’ Conrad Astronomy Awards Program.
Sec. 152. GAO assessment of feasibility of Moon and Mars exploration missions.

TITLE C—LIMITATIONS AND SPECIAL AUTHORITY

Sec. 161. Official representational fund.
Sec. 161. Facilities management.

TITLE II—INTERNATIONAL SPACE STATION

Sec. 201. International Space Station completion.
Sec. 202. Research and support capabilities on international Space Station.
Sec. 204. National laboratory status for International Space Station.
Sec. 204. Commercial support of International Space Station operations.
Sec. 205. Use of the International Space Station and annual report.

TITLE III—NATIONAL SPACE TRANSPORTATION POLICY

Sec. 301. United States human-rated launch capacity assessment.
Sec. 302. Space Shuttle transition.
Sec. 303. Commercial launch vehicles.
Sec. 304. Secondary payload capability.

TITLE IV—ENABLING COMMERCIAL ACTIVITY

Sec. 401. Commercialization plan.
Sec. 402. Authority for competitive prize program to encourage development of advanced space and aeronautical technologies.
Sec. 403. Commercial goods and services.

TITLE V—MISCELLANEOUS ADMINISTRATIVE IMPROVEMENTS

Sec. 501. Extension of indemnification authority.
Sec. 502. Intellectual property provisions.
Sec. 503. Retrocession of jurisdiction.
Sec. 504. Recovery and disposition authority.
Sec. 505. Requirement for independent cost analysis.
Sec. 506. Electronic access to business opportunities.
Sec. 507. Reports elimination.

SEC. 2. FINDINGS.

The Congress finds the following:

(1) It is the policy of the United States to advance United States scientific, security, and economic interests through a healthy and active space exploration program.

(2) Basic and applied research in space science, Earth science, and aeronautics remain a significant part of the Nation’s goals for the use and development of space. Basic research and development is an important component of NASA’s program of exploration and discovery.

(3) Maintaining the capability to safely send humans into space is essential to United States national and economic security. United States preeminence in space, and inspiring the next generation of explorers. Thus, a gap in United States human space flight capability is harmful to the national interest.

(4) The exploration, development, and permanent habitation of the Moon will—

(A) inspire the Nation;

(B) spur commerce, imagination, and excitement around the world; and

(C) open the possibility of further exploration of Mars.

(5) The establishment of the capability for consistent access to and stewardship of the region between the Moon and Earth is in the national security and commercial interests of the United States.

(6) Commercial development of space, including exploration and other lawful uses, is in the interest of the United States and the international community at large.

(7) Research and access to capabilities should support a national laboratory facility within the United States segment of the ISS in low-
Earth orbit are in the national policy interests of the United States, including maintenance and development of an active and healthy stream of research from ground to space. These programs and facilities uniquely benefit from access to this facility.

(8) NASA should develop vehicles to replace the Shuttle orbiter’s capabilities for transitioning to new and near-Earth missions while utilizing the current program’s resources, including human capital, capabilities, and infrastructure. Using these resources can ease the transition to a new space transportation system, maintain an essential industrial base, and minimize technology and safety risks.

(9) The United States must remain the leader in aeronautics and aviation. NASA should align its aerospace research to ensure United States leadership in aeronautics and aviation.

The United States must remain the leader in aeronautics and aviation. Any erosion of this preeminence is not in the Nation’s economic or security interest. A national effort is needed to ensure that NASA’s aeronautics programs are leading contributors to a sustained national approach that ensures efficiency and national preeminence in aeronautics and aviation.

The United States must remain the leader in aeronautics and aviation. Any erosion of this preeminence is not in the Nation’s economic or security interest. A national effort is needed to ensure that NASA’s aeronautics programs are leading contributors to a sustained national approach that ensures efficiency and national preeminence in aeronautics and aviation.

The term ‘Shuttle-derived vehicle’ means any new space transportation vehicle, piloted or unpiloted, that—

(A) is capable of supporting crew or cargo missions; and

(B) uses a major component of NASA’s Space Transportation System, such as the solid rocket booster, external tank, engine, and orbiter.

The term ‘in-situ resource utilization’ means the technology or systems that can convert indigenous or locally-situated substances into useful materials and products.

Subsection B—General Provisions

SEC. 131. IMPLEMENTATION OF A SCIENCE PROGRAM THAT EXTENDS HUMAN KNOWLEDGE AND UNDERSTANDING OF THE EARTH, SUN, SOLAR SYSTEM, AND UNIVERSE.

The Administrator shall—

(1) conduct a rich and vigorous set of science activities aimed at better comprehension of the universe, solar system, and Earth, and ensure that the various areas within NASA’s science portfolio are developed and maintained in a balanced and healthy manner;

(2) plan projects to enhance near-Earth object detection and observation.

(3) upon successful completion of the planned return-to-flight campaign of the Space Shuttle, determine the schedule for a Shuttle servicing mission to the Hubble Space Telescope, unless such a mission would compromise safety or the integrity of NASA’s other missions;

(4) ensure that, in implementing the provisions of this section, appropriate inter-agency and inter-government collaboration opportunities are sought and utilized to the maximum feasible extent;

(5) seek opportunities to diversify the flight capability for robotic precursor missions, including those for robotic precursor missions to the Moon or Mars. The Administrator shall award a contract for this purpose;

(6) develop in coordination with the National Aeronautics and Space Administration, for fiscal year 2007, $17,052,900,000, as follows:

(1) $10,549,800,000 for science, aeronautics and exploration (including amounts for construction of facilities);

(2) For exploration capabilities, $6,460,800,000, including amounts for construction of facilities, of which $6,460,800,000 shall be for space operations;

(3) For the Office of Inspector General, $35,500,000.

SEC. 102. FISCAL YEAR 2008.

There are authorized to be appropriated to the National Aeronautics and Space Administration, for fiscal year 2008, $17,470,900,000.

SEC. 103. FISCAL YEAR 2009.

There are authorized to be appropriated to the National Aeronautics and Space Administration, for fiscal year 2009, $17,995,000,000.

SEC. 105. FISCAL YEAR 2010.

There are authorized to be appropriated to the National Aeronautics and Space Administration, for fiscal year 2010, $18,534,900,000.

SEC. 106. EVALUATION CRITERIA FOR BUDGET REQUEST.

It is the sense of the Congress that each budget of the United States submitted to the Congress after the date of enactment of this Act should be evaluated for compliance with the findings and priorities established by this Act and the amendments made by this Act.

Subsection B—General Provisions

SEC. 131. IMPLEMENTATION OF A SCIENCE PROGRAM THAT EXTENDS HUMAN KNOWLEDGE AND UNDERSTANDING OF THE EARTH, SUN, SOLAR SYSTEM, AND UNIVERSE.

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(4) ensure that, in implementing the provisions of this section, appropriate inter-agency and inter-government collaboration opportunities are sought and utilized to the maximum feasible extent;

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(1) $10,549,800,000 for science, aeronautics and exploration (including amounts for construction of facilities);

(2) For exploration capabilities, $6,460,800,000, including amounts for construction of facilities, of which $6,460,800,000 shall be for space operations;

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SEC. 105. FISCAL YEAR 2010.

There are authorized to be appropriated to the National Aeronautics and Space Administration, for fiscal year 2010, $18,534,900,000.
(4) conduct an intensive in-situ resource utilization technology program in order to develop the capability to use space resources to increase independence from Earth, and sustain operations in a low-Earth orbit.

SEC. 135. GROUND-BASED ANALOG CAPABILITIES.
(a) In General.—The Administrator shall establish a ground-based analog capability in remote United States locations in order to assist the operations of lunar operations, life support, and in-situ resource utilization experience and capabilities.

(b) Locations.—The Administrator shall select locations for subsection (a) in places that—
(1) are regularly accessible;
(2) have significant temperature extremes and rainfall;
(3) have access to energy and natural resources (including geothermal, permafrost, volcanic, and other potential resources).

(c) Involvement of Local Populations; Private Sector Partners.—In carrying out this section, the Administrator shall involve local populations, academia, and industrial partners as much as possible to ensure that ground-based benefits and applications are encouraged and developed.

SEC. 136. SPACE LAUNCH AND TRANSPORTATION TRANSITION, CAPABILITIES, AND DEVELOPMENT.
(a) Post-Orbiter Transition.—The Administrator shall develop an implementation plan for the transition to a new crew exploration vehicle and heavy-lift launch vehicle that uses the personnel, capabilities, assets, and infrastructure of the Space Shuttle to the fullest extent possible and addresses how NASA will accommodate the docking of the new crew exploration vehicle to the ISS.

(b) Automated Rendezvous and Docking.—The Administrator is directed to pursue aggressively automated rendezvous and docking capabilities that can support ISS and other mission requirements and include these activities, progress reports, and plans in the implementation plan.

(c) Congressional Submission.—Within 120 days after the date of enactment of this Act the Administrator shall submit a copy of the implementation plan to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science.

SEC. 137. NATIONAL POLICY FOR AERONAUTICS RESEARCH AND DEVELOPMENT.
(a) In General.—Through the Director of the Office of Science and Technology Policy, shall develop, in consultation with NASA and other relevant Federal agencies, aeronautics policy to guide the aeronautics programs of the United States for the year 2020. The development of this policy shall utilize external studies that have been conducted on the state of United States aeronautics and aviation research and have suggested policies to ensure continued competitiveness.

(b) Priorities.—At a minimum the national aeronautics policy shall describe—
(1) national goals for aeronautics research;
(2) the priority areas of research for aeronautics through fiscal year 2011;
(3) the basis of which and the process by which priorities for ensuring fiscal years will be selected; and
(4) the nature and responsibilities of various Federal agencies in aeronautics research.

[Omitted]

(1) uniqueness, mission dependency, and industry need; and

(2) the development or initiation of a consolidated national aviation research, development, and demonstration program.

(i) Schedule.—No later than 1 year after the date of enactment of this Act, the President’s Science and Technology Policy Decision to the Administrator shall submit the national aeronautics policy to the Appropriations Committees of the House of Representatives and the Senate, the Committee on Science, and the Senate Committee on Commerce, Science, and Transportation.

SEC. 138. IDENTIFICATION OF UNIQUE NASA ACTIVITIES RESEARCH.
Within 180 days after the date of enactment of this Act, the Administrator shall submit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science that assesses the aeronautics research program for its current and potential application to new aeronautical and space vehicles and the unique aeronautical research and associated capabilities that must be retained and supported by NASA to further space exploration and support United States economic competitiveness.

SEC. 139. LESSONS LEARNED AND BEST PRACTICES.
(a) In General.—The Administrator shall provide an implementation plan describing NASA’s commitment to maintaining, implementing, and sharing lessons learned and best practices for its major programs and projects within 180 days after the date of enactment of this Act. The implementation plan shall be updated and maintained to assure that it is current and consistent with the burgeoning culture of learning and safety that is emerging at NASA.

(b) Required Content.—The implementation plan shall contain as a minimum the lessons learned and best practices requirements for NASA, the organizations or positions responsible for enforcement of the requirements, the reporting structure, and the objective performance measures indicating the effectiveness of the activity.

(c) Incentives.—The Administrator shall provide incentives to encourage sharing and implementation of lessons learned and best practices by employees, projects, and programs, as well as penalties for programs and projects that do not have demonstrated use of those resources.

SEC. 140. SAFETY MANAGEMENT.
Section 6 of the National Aeronautics and Space Administration Authorization Act, 1968 (42 U.S.C. 2477) is amended—
(1) by inserting “(a) In General.—” before “There shall”;
(2) by striking “to it” and inserting “to it, including evaluating NASA’s compliance with the return-to-flight and continue-to-fly recommendations of the Columbia Accident Investigation Board”;
(3) by inserting “and the Congress” after “advise the Administrator”; and
(4) by striking “and with respect to the adequacy of existing safety standards and shall” and inserting “with respect to the adequacy of proposed or existing safety standards, and with respect to management and Science, The Panel had also”;

(b) by adding at the end the following:
(1) ANNUAL REPORT.—The Panel shall submit an annual report to the Administrator and to the Congress. In the first annual report submitted after the date of enactment of this Act, the report shall include the findings of the Space Shuttle Accident Investigation Board.

(2) Sense of Congress.—It is the sense of the Congress that the Administrator should—
(1) ensure that NASA employees can raise safety concerns without fear of reprisal;
(2) continue to follow the recommendations of the Columbia Accident Investigation Board for safety returning and continuing to fly; and
(3) continue to inform the Congress from time to time of NASA’s progress in meeting these recommendations.

SEC. 141. CREATION OF A BUDGET STRUCTURE THAT AIDS EFFECTIVE OVERSIGHT AND MANAGEMENT.
In developing NASA’s budget request for inclusion in the Budget of the United States Government for fiscal year 2007 and thereafter, the Administrator shall—
(1) include line items for—
(A) science, aeronautics, and exploration;
(B) exploration capabilities; and
(C) the Office of the Inspector General;
(2) enumerate separately, within the science, aeronautics, and exploration account, the requests for—
(A) space science;
(B) Earth science; and
(C) aeronautics;
(3) include, within the exploration capabilities account, the requests for—
(A) the Space Shuttle; and
(B) the ISS; and
(4) enumerate separately the specific requests for the independent technical authority within the appropriate account.

SEC. 142. EARTH OBSERVING SYSTEM.
(a) In General.—Within 6 months after the date of enactment of this Act, the Administrator, in consultation with the Administrator of the National Oceanic and Atmospheric Administration and the Director of the United States Geological Survey, shall submit a plan to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science to ensure the long-term viability of the earth observing system at NASA.

(b) Plan Requirements.—The plan shall—
(1) address such issues as—
(A) out-year budgetary projections;
(B) technical requirements for the system; and
(C) integration into the Global Earth Observing System of Systems; and
(2) evaluate—
(A) the need to proceed with any NASA missions that have been delayed or canceled; and
(B) the need to strengthen research and analysis programs; and
(C) the need to strengthen the approach to obtaining important climate observations and data records.

(d) Earth Observing System Defined.—In this section, the term “earth observing system” means the series of satellites, a science component, and a data system for long-term global observations of the land surface, biosphere, solid Earth, atmosphere, and oceans.

SEC. 143. NASA HEALTHCARE PROGRAM.
The Administrator shall develop policies, procedures, and plans necessary to—
(1) the establishment of a lifetime healthcare program for NASA astronauts and their families; and
(2) the study and analysis of the healthcare data required in order to understand the long-term health effects of space flight on humans better.
SEC. 144. ASSESSMENT OF EXTENSION OF DATA COLLECTION FROM ULYSSES AND VOYAGER SPACECRAFT.

(a) Assessment.—Not later than 60 days after the date of the enactment of this Act, the Administrator shall carry out an assessment of the costs and benefits of extending, to such date as the Administrator considers appropriate for purposes of the assessment, the date of the termination of data collection from the Ulysses spacecraft and the Voyager spacecraft.

(b) Report.—Not later than 30 days after completing the assessment required by subsection (a), the Administrator shall submit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science.

SEC. 145. PROGRAM TO EXPAND DISTANCE LEARNING IN RURAL UNDERSERVED AREAS.

(a) In general.—The Administrator shall develop or expand programs to extend science and space educational outreach to rural communities and underrepresented groups.

(b) Report.—Not later than 30 days after completing the assessment required by subsection (a), the Administrator shall give priority to existing programs, including Challenger Learning Centers—

(1) that utilize community-based partnerships in the field;
(2) that build and maintain video conference and exhibit capacity;
(3) that travel directly to rural communities and school districts; and
(4) with a special emphasis on increasing the number of women and minorities in the science and engineering professions.

SEC. 146. INSTITUTIONS IN NASA’S MINORITY IN-\(\text{E}\)REPRESENTATION PROGRAM.

The matter appearing under the heading “SMALL AND DISADVANTAGED BUSINESS” in title III of the Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 1990 (42 U.S.C. 2473; 103 Stat. 863) is amended by striking “Historically Black Colleges and Universities and Minority-Serving Institutions (as defined in section 316(b)(3) of that Act)” and inserting “Historically Black Colleges and Universities and Minority-Serving Institutions (as defined in section 316(b)(3) of that Act)”.

SEC. 147. AVIATION SAFETY PROGRAM.

The Administrator shall make available upon request satellite imagery of remote terrain to the Administrator of the Federal Aviation Administration, or the Director of the Five Star Medal Program, for aviation safety and aerial photography programs to assist and train pilots in navigating challenging topographical features of such terrain.

SEC. 148. ATMOSPHERIC, GEOPHYSICAL, AND ROCKET RESEARCH AUTHORIZATIONS.

There are authorized to be appropriated to the Administrator for atmospheric, geophysical, or rocket research at the Poker Flat Research Range and the Kodiak Launch Complex, not more than $6,000,000 for each of fiscal years 2006 through 2010.

SEC. 149. ORBITAL DEBRIS.

The Administrator, in conjunction with the heads of other Federal agencies, shall take steps to develop and implement technologies that will enable NASA to decrease the risks associated with orbital debris.

SEC. 150. CONTINUATION OF CERTAIN EDUCATIONAL PROGRAMS.

From amounts appropriated to NASA for educational programs, the Administrator shall ensure continuation of the Teacher and Science Grant Program, the Experimental Program to Stimulate Competitive Research, and the NASA Explorer School to maintain and develop the next generation of explorers.

SEC. 151. ESTABLISHMENT OF THE CHARLES “PETE” CONRAD ASTRONOMY AWARDS PROGRAM.

(a) In general.—The Administrator shall establish a program to be known as the Charles “Pete” Conrad Astronomy Awards Program.

(b) Award program.—The Administrator shall make an annual award under the program of—

(1) $3,000 to the amateur astronomer or group of amateur astronomers who in the preceding year discovered the intrinsically brightest near-Earth asteroid among the near-Earth asteroids that were discovered during that year by amateur astronomers or groups of amateur astronomers; and
(2) $3,000 to the amateur astronomer or group of amateur astronomers who made the greatest contribution to the Minor Planet Center’s mission of cataloguing near-Earth asteroids during the preceding year.

(c) Qualification for award.—

(1) Recommendation.—These awards shall be made based on recommendation of the Minor Planet Center of the Smithsonian Astrophysical Observatory.

(2) Limitation.—No individual who is not a citizen or permanent resident of the United States at the time of that individual’s discovery or contribution may receive an award under this program.

SEC. 152. GAO ASSESSMENT OF FEASIBILITY OF MOON AND MARS EXPLORATION MISSIONS.

Within 9 months after the date of enactment of this Act, the Comptroller General shall transmit to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science an assessment of the feasibility of NASA’s planning for exploration of the Moon and Mars, giving special consideration to the long-term cost implications of program architecture and schedules.

Subtitle C—Limitations and Special Authority

SEC. 161. OFFICIAL REPRESENTATIONAL FUND.

Amounts appropriated pursuant to paragraphs (1) and (2) of section 101 may be used to pay all necessary expenses, including official reception and representation expenses.

SEC. 162. FACILITIES MANAGEMENT.

(a) In general.—Notwithstanding any other provisions of law, any facility that the Administrator shall acquire, lease, or operate, including facilities that the Administrator shall lease or operate under the custodianship of the Administrator, may convey, by sale, lease, exchange, or otherwise, including through leaseback arrangements, real and related personal property under the custody and control of the Administrator, or interests therein, and retain the net proceeds of such dispositions in an account within NASA’s working capital fund to be used for the purchase of related property capital needs. All net proceeds realized under this section shall be obligated or expended only as authorized by appropriations Acts. To aid in the use of this authority, NASA shall develop a facilities investment plan that takes into account uniqueness, mission dependency, and other studies required by this Act. As authorized by appropriations Acts, sales transactions under this section are subject to section 501 of the McKinney-Vento Homelessness Assistance Act (42 U.S.C. 1411).

(b) Application of other law.—Sales transactions under this section are subject to section 501 of the McKinney-Vento Homelessness Assistance Act (42 U.S.C. 1411).

(c) Net proceeds.—If any funds authorized by this Act are subject to a reprogramming action that requires notice to be provided to the Appropriations Committees of the House of Representatives and the Senate, notice of such action shall concurrently be provided to the House of Representatives Committee on Science and the Senate Committee on Commerce, Science, and Transportation.

(d) Definitions.—In this section—

(1) net proceeds means the rental and other sums received less the costs of the disposition;
(2) real property capital needs.—The term “real property capital needs” means any expenses necessary and incident to the agency’s real property capital acquisitions, improvements, and dispositions.

TITLE II—INTERNATIONAL SPACE STATION

SEC. 201. INTERNATIONAL SPACE STATION COMPLETION.

(a) Elements, capabilities, and configuration criteria.—The Administrator shall ensure that the ISS will be able to—

(1) fulfill international partner agreements and provide a diverse range of research capability, including a high rate of human biomedical research protocols, countermeasures, applied bio-technologies, technology and exploration research, and other priority areas;
(2) have an ability to support crew size of at least 6 persons;
(3) support crew exploration vehicle docking and automated docking facilities or modules launched by either heavy-lift or commercially-developed launch vehicles; and
(4) be operated at an appropriate risk level.

(b) Contingency plan.—The Administration shall develop a facilities investment plan to support ISS shall include contingency options to ensure sufficient logistics and on-orbit capabilities to support any potential hiatus between Shuttle availability and follow-on crew and cargo systems, and provide sufficient pre-positioning of spares and other supplies needed to accommodate any such interval.

(c) Certification.—Within 180 days after the date of enactment of this Act, and before making any change in the ISS assembly sequence in effect on the date of enactment of this Act, the Administrator shall certify to the Congress Information pertaining to the impact of the Columbia accident—the Administrator shall certify in writing to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science NASA’s plan to meet the requirements of subsections (a) and (b).

SEC. 202. RESEARCH AND SUPPORT CAPABILITIES ON INTERNATIONAL SPACE STATION.

(a) In general.—The Administrator shall—

(1) within 6 months after the date of enactment of this Act, provide an assessment of biomedical and life science research planned for implementation aboard the ISS that inclement of the identified research which can be performed in ground-based facilities and then, if appropriate, validated in space to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science;

(2) ensure the capacity to support ground-based research leading to spaceflight of scientific research with potential direct national benefits and applications that can advance significantly from the uniqueness of micro-gravity; and

(b) Appropriate follow-on research and prototyping of ISS research activities as molecular crystal growth, animal research, basic fluid physics,
combustion research, cellular biotechnology, low temperature physics, and cellular research at a level which will sustain the existing scientific expertise and research capabilities as additionals, or resources from sources other than NASA can be identified to support these activities within the framework of the National Laboratory, provided for in section 203 of this Act; and

(4) within 1 year after the date of enactment of this Act, develop a research plan that will demonstrate the process by which NASA will evolve the ISS research portfolio in a manner consistent with the planned growth and evolution of ISS on-orbit and transportation needs.

(b) MAINTENANCE OF ON-ORBIT ANALYTICAL CAPABILITIES.—The Administrator shall ensure that on-orbit analytical capabilities to support diagnostic human research, as well as on-orbit characterization of molecular crystal growth, cellular research, and other research products and results are developed and maintained, as an alternative to Earth-based analysis requiring the capability of returning research products to Earth.

(c) POTENTIAL SCIENTIFIC USES.—The Administrator shall assess further potential possible scientific uses of the ISS facilities, such as technology development, development of manufacturing processes, Earth observation and characterization, and astronomical observations.

(d) TRANSITION TO PUBLIC-PRIVATE RESEARCH OPERATIONS.—By no later than the date of enactment of this Act, the Administrator shall complete (as determined by the Administrator), the transition steps to transition research operations on the ISS to a greater private-public operating relationship pursuant to section 203 of this Act.

SEC. 203. NATIONAL LABORATORY STATUS FOR INTERNATIONAL SPACE STATION.

(a) In General.—In order to accomplish the objectives listed in section 202, the United States segment of the ISS is hereby designated a national laboratory facility. The Administrator, after consultation with the Director of the Office of Science and Technology Policy, shall develop the national laboratory facility to oversee scientific utilization of the ISS national laboratory within the organizational structure of NASA.

(b) NATIONAL LABORATORY FUNCTIONS.—The Administrator shall seek to use the national laboratory to increase the utilization of the ISS by other national and commercial users and to maximize available NASA funding for research through partnerships, cost-sharing agreements, and arrangements with non-NASA entities.

(c) IMPLEMENTATION PLAN.—Within 1 year after the date of enactment of this Act, the Administrator shall provide an implementation plan to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science containing a detailed and comprehensive work breakdown of the administrative, technical, and financial requirements needed to support the space launch and transportation transition implementation plan required by section 136 of this Act, as well as for the ISS, including:

(1) the manner in which the capabilities of any proposed human-rated crew and launch vehicles meet the requirements of the implementation plan under section 136 of this Act;

(2) a retention plan of skilled personnel from the legacy Shuttle program which will sustain the level of safety for that program for the duration of the transition and plan that will ensure that any NASA programs can utilize the human capital resources of the Shuttle program, to the maximum extent practicable;

(3) the implications for and impact on the Nation’s aerospace industrial base;

(4) the manner in which the proposed vehicles contribute to a national mixed fleet launch and flight capacity;

(5) the nature and timing of the transition from the Space Shuttle to the workforce, the proposed vehicles, and any related infrastructure;

(6) support for ISS crew transportation, ISS utilization, and lunar exploration architecture;

(7) for any human rated vehicle, a crew escape system, as well as substantial protection against orbital debris strikes that offers a high level of safety;

(8) development risk areas;

(9) the schedule and cost;

(10) the relationship between crew and cargo capabilities; and

(11) the ability to reduce risk through the use of currently qualified hardware.

SEC. 204. COMMERCIAL SUPPORT OF INTERNATIONAL SPACE STATION OPERATIONS AND UTILIZATION.

The Administrator shall pursue commercial services for support of the ISS for cargo and other [needed] needs, and for enhancement of the commercial use of the ISS to the maximum extent possible, in accordance with Federal procurement law.

SEC. 205. USE OF THE INTERNATIONAL SPACE STATION AND ANNUAL REPORT.

(a) POLICY.—It is the policy of the United States that:

(1) to ensure diverse and growing utilization of benefits from the ISS; and

(2) to increase commercial operations in low-Earth orbit and beyond that are supported by national and commercial space transportation needs, to the extent practicable.

(b) USE OF INTERNATIONAL SPACE STATION.—The Administrator shall conduct broadly focused research and exploration research and development activities using the ISS in a manner consistent with the provisions of this title, and advance the Nation’s exploration of space beyond, using the ISS as a test-bed and outpost for operations, engineering, and scientific research.

(c) REPORTS.—No later than March 31 of each year, the Administrator shall submit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science containing a detailed and comprehensive Space Shuttle transition plan that includes all necessary reconfiguration, including requirements, assumptions, performance, and baseline, in order to utilize the Space Shuttle orbiter beyond calendar year 2010.

(d) U.S. SEGMENT DEFINED.—The Administrator may not terminate any contracts nor replace any vendors associated with the Space Shuttle orbiter, except that the Administrator shall provide the capabilities to support secondary payloads on United States launch vehicles, including free flyers, for commercial launch services weighing less than 500 kilograms.

TITLE III—NATIONAL SPACE TRANSPORTATION POLICY

SEC. 301. UNITED STATES HUMAN-RATED LAUNCH CAPACITY ASSESSMENT.

Notwithstanding any other provision of law, the Administrator shall, within 60 days after the date of enactment of this Act, provide to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science, a full description of the purposes and requirements needed to support the space launch and transportation transition implementation plan required by section 136 of this Act, as well as for the ISS, including:

(1) the manner in which the capabilities of any proposed human-rated crew and launch vehicles meet the requirements of the implementation plan under section 136 of this Act;

(2) a retention plan of skilled personnel from the legacy Shuttle program which will sustain the level of safety for that program for the duration of the transition and plan that will ensure that any NASA programs can utilize the human capital resources of the Shuttle program, to the maximum extent practicable;

(3) the implications for and impact on the Nation’s aerospace industrial base;

(4) the manner in which the proposed vehicles contribute to a national mixed fleet launch and flight capacity;

(5) the nature and timing of the transition from the Space Shuttle to the workforce, the proposed vehicles, and any related infrastructure;

(6) support for ISS crew transportation, ISS utilization, and lunar exploration architecture;

(7) for any human rated vehicle, a crew escape system, as well as substantial protection against orbital debris strikes that offers a high level of safety;

(8) development risk areas;

(9) the schedule and cost;

(10) the relationship between crew and cargo capabilities; and

(11) the ability to reduce risk through the use of currently qualified hardware.

SEC. 302. SPACE SHUTTLE TRANSITION.

In order to help develop a cadre of experienced engineers and to provide more routine and reliable access to space, the Administrator shall provide the capabilities to support secondary payloads on United States launch vehicles, including free flyers, for commercial launch vehicles weighing less than 500 kilograms.

SEC. 303. COMMERCIAL LAUNCH VEHICLES.

It is the sense of Congress that the Administrator should use current and emerging commercial launch vehicles to fulfill appropriate mission needs, including the support of low-Earth orbit and lunar exploration operations.

SEC. 304. SECONDARY PAYLOAD CAPABILITY.

In order to help develop a cadre of experienced engineers and to provide more routine and reliable access to space, the Administrator shall provide the capabilities to support secondary payloads on United States launch vehicles, including free flyers, for commercial launch services weighing less than 500 kilograms.

TITLE IV—ENABLING COMMERCIAL ACTIVITY

SEC. 401. COMMERCIALIZATION PLAN.

(a) In General.—The Administrator, in consultation with the Associate Administrator for Space Transportation of the Federal Aviation Administration, the Director of the Office of Space Commercialization of the Department of Commerce, and any other relevant agencies, shall develop a commercialization plan to support the human missions to the Moon and Mars, to support Low-Earth orbit activities, and to support space science missions and applications, and to transfer science research and technology to society. The plan shall identify opportunities for the private sector to participate in the future missions and activities, including opportunities for partnership between NASA and the private sector in the development of technologies and services for the utilization of the ISS by advancements made by the private sector in space launch and orbital hardware, and shall include opportunities for innovative collaborations between NASA and the private sector under existing authorities of NASA for reimbursable and non-reimbursable

SEC. 402. SPACE SHUTTLE ORBITER.
agreements under the National Aeronautics and Space Act of 1958 (42 U.S.C. 2451 et seq.).

(b) REPORT.—Within 180 days after the date of enactment of this Act, the Administrator shall submit a copy of the plan to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science.

SEC. 402. AUTHORITY FOR COMPETITIVE PRIZE PROGRAM TO ENCOURAGE DEVELOPMENT OF ADVANCED SPACE AND AERONAUTICAL TECHNOLOGIES.

Title III of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2451 et seq.) is amended by adding at the end the following:

"SEC. 316. PROGRAM ON COMPETITIVE AWARD OF PRIZES TO ENCOURAGE DEVELOPMENT OF ADVANCED SPACE AND AERONAUTICAL TECHNOLOGIES.

(a) PROGRAM AUTHORIZED.—The Administrator may carry out a program to award prizes to stimulate innovation in basic and applied research, technology development, and prototype demonstration projects that have the potential for application to the performance of the space and aeronautical activities of the Administration.

(b) USE OF PRIZE AUTHORITY.—In carrying out the program, the Administrator shall seek to develop and support technologies and areas of research 134 of the Public Law 97-149 for other areas that the Administrator determines to be providing impetus to NASA’s overall exploration and science architecture and plans. In the efforts to protect near-Earth objects and, where practicable, utilize the prize winner’s technologies in fulfilling NASA’s missions. The Administrator shall widely advertise any competitions conducted under the program and must include advertising to research universities.

(c) REGISTRATION; ASSUMPTION OF RISK.—(1) Each potential recipient of a prize in a competition under the program shall be required to register with the Administrator and shall register for the competition.

(2) ASSUMPTION OF RISK.—In registering for a competition under paragraph (1), a participant shall agree to accept all risks and waives claim against the United States Government and its related entities, for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from participation in the competition, whether such injury, death, damage, or loss arises in compliance with or negligence or otherwise, except in the case of willful misconduct.

(d) RELATED ENTITY DEFINED.—In this subsection, the term ‘related entity’ includes a contractor, subcontractor at any tier, or any supplier, user, customer, cooperating party, grantee, investigator, or detailed employee.

(e) TOTAL AMOUNT.—The total amount of cash prizes available for award in competitions under the program under this section in any fiscal year shall exceed $50,000,000.

(f) APPROVAL REQUIRED FOR LARGE PRIZES.—No competition under the program may result in the award of more than $1,000,000 in any fiscal year without the prior approval of the Administrator or a designee of the Administrator.

(g) RELATIONSHIP TO OTHER AUTHORITY.—The Administrator may utilize the authority in this section in conjunction with or in addition to the utilization of any other authority of the Administrator to acquire, support, or stimulate basic and applied research, technology development, or prototype demonstration projects that are feasible in support of the human missions beyond Earth and should encourage commercial use and access of space to the greatest extent practicable.

TITLE V—MISCELLANEOUS ADMINISTRATIVE IMPROVEMENTS

SEC. 501. EXTENSION OF INDEMNIFICATION AUTHORITY.

Section 309 of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2458c) is amended by striking ‘‘December 31, 2002’’ and inserting ‘‘December 31, 2009’’.

SEC. 502. INTELLECTUAL PROPERTY PROVISIONS.

Section 305 of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2457) is amended by inserting after subsection (f) the following:

"‘(i) the Administrator may take control over the rights that would be held under such an agreement, grants under this subsection shall be made as if it had been obtained from a non-Federal party.

(2) If the Administrator assigns title or grants an exclusive license to such an invention, the Government shall, within the rights of the Administrator:

(i) to require the participating party to grant to a responsible applicant a nonexclusive, partially exclusive, or exclusive license to use the appropriate licensed field of use, on terms that are reasonable under the circumstances; or

(ii) if the participating party fails to grant such a license, to grant the license itself.

(C) The Government may exercise its rights under paragraph (2) in exceptional circumstances and only if the Government determines that—

(i) the action is necessary to meet health or safety needs that are not reasonably satisfied by the participating party;

(ii) the action is necessary to meet requirements for public use specified by Federal regulations, and such requirements are not reasonably satisfied by the participating party; or

(iii) the action is necessary to comply with an agreement containing provisions described in section 12(c)(4)(B) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 370a(c)(4)(B))."

SEC. 503. RETROCESSION OF JURISDICTION.

Title III of the National Aeronautics and Space Act of 1958, as amended by section 502 of this Act, is further amended by adding at the end the following:

"SEC. 317. RETROCESSION OF JURISDICTION.

‘‘Notwithstanding any other provision of law, the Administrator may, whenever the Administrator considers it desirable, relinquish to a State all or part of the legislative jurisdiction of the United States over lands or interests under the Administrator’s control in that State. Relinquishment of legislative jurisdiction under this section may be accomplished by filing with the Governor of the State concerned a notice of relinquishment to take effect upon acceptance thereof, or as the laws of the State may otherwise provide.

SEC. 504. RECOVERY AND DISPOSITION AUTHORITY.

Title III of the National Aeronautics and Space Act of 1958, as amended by section 502 of this Act, is further amended by adding at the end the following:

"SEC. 318. RECOVERY AND DISPOSITION AUTHORITY.

(‘‘a) IN GENERAL.—

(1) CONTROL OF REMAINS.—Subject to paragraph (2), whenever there is an accident or mishap resulting in the death of a crewmember of a NASA human space flight vehicle, the Administrator may take control over the remains of the crewmember and any human remains of other scientific or medical tests.

(2) TREATMENT.—Each crewmember shall provide the Administrator with his or her preferences regarding the treatment accorded to his or her remains and the Administrator shall, to the extent possible, respect those stated preferences.

(b) DEFINITIONS.—In this section:

(1) CREWMEMBER.—The term ‘crewmember’ means an astronaut or other person assigned to a NASA human space flight vehicle.

(2) NASA HUMAN SPACE FLIGHT VEHICLE.—The term ‘NASA human space flight vehicle’ means a space vehicle, as defined in section 552(b)(4) of this Act.

(3) OPERATE.—The term does not include activities prescribed by section 552(b)(4) of this Act.

(4) CUSTODIAL.—The term ‘custodial’ includes possession, custody, operation, or use.

(5) AIRCRAFT.—The term ‘aircraft’ includes an aircraft, as defined in section 3902 of title 49, United States Code.

(6) VEHICLE.—The term includes any man-made object in outer space, including a spacecraft, satellite, space station, space orbiting platform, or any part of such object.''

SEC. 505. REQUIREMENT FOR INDEPENDENT COST ANALYSIS.

Section 301 of the National Aeronautics and Space Administration Authorization Act of 2000 (42 U.S.C. 2459a) is amended—
SEC. 506. ELECTRONIC ACCESS TO BUSINESS OPPORTUNITIES.

Title III of the National Aeronautics and Space Act of 1958, as amended by section 604 of this Act, is further amended by adding at the end the following:

"(e)

SEC. 319. ELECTRONIC ACCESS TO BUSINESS OPPORTUNITIES.

"(a) In General.—The Administrator of the National Aeronautics and Space Administration shall conduct a test program, or allowed to expire.


"(f) Implementation.—

"(1) Nothing in this section shall be construed as modifying regulatory requirements set forth in the Federal Acquisition Regulation, except with respect to

"(A) the applicable wait period between publication of notice of a proposed contract action and release of the solicitation for procurements conducted by the National Aeronautics and Space Administration;


"(g) Compliance with Subparagraph (A) and Subparagraph (B) of this subsection is made accessible simultaneously and the wait period is waived pursuant to paragraph (1), the deadline for the submission of bids or proposals shall be not less than 5 days greater than the minimum deadline set forth in section 8(e)(3)(B) of the Small Business Act (15 U.S.C. 637(e)(3)(B)) and section 18(a)(3)(B) of the Office of Federal Procurement Policy Act (41 U.S.C. 416(a)(3)(B))."

"(h) The Administration—

"(1) make the proposed regulations available for public comment for a period of not less than 60 days; and

"(2) addresses whether the pilot program should be made permanent, continued as a test program, or allowed to expire.

"(i) The Administration shall publish proposed revisions to the NASA Federal Acquisition Regulation Supplement necessary to implement this section in the Federal Register not later than 120 days after the date of enactment of the National Aeronautics and Space Administration Act of 2005. The Administrator shall:

"(1) make the proposed regulations available for public comment for a period of not less than 60 days; and

"(2) publish final regulations in the Federal Register not later than 240 days after the date of enactment of that Act.

"(1) Effective Date.—

"(i) In General.—The pilot program authorized in this section shall take effect on the date specified in the final regulations promulgated pursuant to subsection (b)(2).

"(ii) Limitation.—The date so specified shall be no less than 30 days after the date on which the final regulation is published.

SEC. 507. REPORTS ELIMINATION.

(a) Repeals.—The following provisions of law are repealed:


(b) Amendments.—

"(1) Section 315 of the National Aeronautics and Space Administration Act of 1968 (42 U.S.C. 2459) is amended by striking subsection (a) and redesignating subsections (b) through (f) as subsections (a) through (e).

"(2) The National Aeronautics and Space Administration Authorization Act, Fiscal Year 1993 (42 U.S.C. 2867(a)) is amended by striking subsection (d) and redesignating subsection (e) as subsection (d).

VETERANS' BENEFITS IMPROVEMENT ACT OF 2005

Mr. GRASSLEY. Mr. President, I ask unanimous consent that the Senate proceed to the immediate consideration of Calendar 218, S. 1235.

The PRESIDING OFFICER. The clerk will report the bill by title.

The assistant legislative clerk read as follows:

A bill (S. 1235) to amend chapters 19 and 37 of title 38, United States Code, to extend the availability of $300,000 in coverage under the servicemembers' life insurance and veterans' group life insurance programs, and for other purposes.

There being no objection, the Senate proceeded to consider the bill which had been reported from the Committee on Veterans' Affairs with an amendment.

(Srike the part shown in black brackets and insert the part shown in italic.)

S. 1235

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

[SECTION 1. SHORT TITLE.]

"This Act may be cited as the ‘‘Veterans' Benefits Improvement Act of 2005’’.

[SEC. 2. GROUP LIFE INSURANCE.]"