

Congressman FRANK PALLONE and NATHAN DEAL by way of letter on May 18, 2007, and wrote at the time as cochairs of the Congressional Lyme and Disease Caucus, “we are writing to respectfully request that you mark up and report H.R. 741.

“H.R. 741, the ‘Lyme and Tick-borne Disease Prevention, Education and Research Act of 2007’ would work toward goals for the prevention, accurate diagnosis, and effective treatment of Lyme disease.”

Then we went on to explain the bill. We pointed out that at the time we had 77 cosponsors. That is now 112 and it is totally bipartisan and includes majority leader STENY HOYER. We also pointed out that Lyme is the most prevalent vector-borne disease in the United States today. More than 220,000 Americans develop Lyme each year. According to the CDC, only 10 percent of the cases that meet its surveillance criteria are reported. Cases that fall outside of the surveillance criteria are not even considered anywhere statistically.

If not diagnosed and treated early, Lyme disease can lead to chronic illness and can affect every system in the body, including the central nervous system and cardiac system. Later symptoms of Lyme disease include arthritis, neurological problems such as facial paralysis, memory problems, extreme weaknesses of the extremities, seizures, heart block and inflammation and even blindness.

So we sent that back in May 18, 2007. And I say that with respect to my colleague.

Let me also point out, and I just will read a very small portion of the statement of Attorney General Richard Blumenthal, the attorney general of Connecticut. And this is his statement.

“Attorney General Richard Blumenthal today announced,” and this is May 1, 2008, “that his antitrust investigation has uncovered serious flaws in the Infectious Disease Society of America’s process for writing its 2006 Lyme disease guidelines and the IDSA has agreed to reassess them with the assistance of an outside arbiter.”

“The IDSA guidelines have sweeping,” this is Blumenthal speaking, “have sweeping and significant impacts on Lyme disease medical care. They are commonly applied by insurance companies in restricting coverage for long-term antibiotic treatment or other medical care and also strongly influence treatment decisions by physicians.

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“Insurance companies have denied coverage for long-term antibiotic treatment, relying on those guidelines as justification. The guidelines are also widely cited for conclusions that chronic Lyme disease is nonexistent.”

Blumenthal goes on to say: “This agreement vindicates my investigation finding undisclosed financial interests and forcing a reassessment of IDSA’s guidelines.”

Blumenthal said: “My office uncovered undisclosed financial interests held by several,” “of the most powerful IDSA panelists. The IDSA’s guideline panel improperly ignored or minimized consideration of alternative medical opinion and evidence regarding chronic Lyme disease, potentially raising serious questions about whether the recommendations reflected all relevant science. The IDSA’s Lyme disease guideline process lacked important procedural safeguards requiring complete reevaluation of its 06 Lyme disease guideline, in effect a comprehensive reassessment through a new panel.”

Blumenthal, and I will put this in the RECORD, talks about the conflicts of interest with the insurance companies. Again, I would think this Congress would want to get to the science, find out does chronic Lyme exists, and whether or not this is indeed a coverup.

The SPEAKER pro tempore. Without objection, the gentleman from Texas (Mr. HALL) will now control the remainder of the time for the gentleman from Oklahoma.

There was no objection.

Mr. HALL of Texas. Mr. Speaker, I have no further requests for time, and I yield back the balance of my time.

Mr. ALLEN. Mr. Speaker, I have no further requests for time, and I yield back the balance of my time.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Maine (Mr. ALLEN) that the House suspend the rules and pass the Senate bill, S. 906.

The question was taken.

The SPEAKER pro tempore. In the opinion of the Chair, two-thirds being in the affirmative, the ayes have it.

Mr. HALL of Texas. Mr. Speaker, I object to the vote on the ground that a quorum is not present and make the point of order that a quorum is not present.

The SPEAKER pro tempore. Pursuant to clause 8 of rule XX and the Chair’s prior announcement, further proceedings on this motion will be postponed.

The point of no quorum is considered withdrawn.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT OF 2008

Mr. GORDON of Tennessee. Mr. Speaker, I move to suspend the rules and concur in the Senate amendment to the bill (H.R. 6063) to authorize the programs of the National Aeronautics and Space Administration, and for other purposes.

The Clerk read the title of the bill.

The text of the Senate amendment is as follows:

Senate amendment:

Strike out all after the enacting clause and insert:

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.*

Sec. 208. *Tornadoes and other severe storms.*

TITLE III—AERONAUTICS

Sec. 301. *Sense of Congress.*

Sec. 302. *Environmentally friendly aircraft research and development initiative.*

Sec. 303. *Research alignment.*

Sec. 304. *Research program to determine perceived impact of sonic booms.*

Sec. 305. *External review of NASA’s aviation safety-related research programs.*

Sec. 306. *Aviation weather research plan.*

Sec. 307. *Funding for research and development activities in support of other mission directorates.*

Sec. 308. *Enhancement of grant program on establishment of university-based centers for research on aviation training.*

TITLE IV—EXPLORATION INITIATIVE

Sec. 401. *Sense of Congress.*

Sec. 402. *Reaffirmation of exploration policy.*

Sec. 403. *Stepping stone approach to exploration.*

Sec. 404. *Lunar outpost.*

Sec. 405. *Exploration technology development.*

Sec. 406. *Exploration risk mitigation plan.*

Sec. 407. *Exploration crew rescue.*

Sec. 408. *Participatory exploration.*

Sec. 409. *Science and exploration.*

Sec. 410. *Congressional Budget Office report update.*

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. *Suborbital research activities.*

Sec. 506. *Restoration of radioisotope thermoelectric generator material production.*

Sec. 507. *Assessment of impediments to interagency cooperation on space and Earth science missions.*

Sec. 508. *Assessment of cost growth.*

Sec. 509. *Outer planets exploration.*

TITLE VI—SPACE OPERATIONS

Subtitle A—International Space Station

Sec. 601. *Plan to support operation and utilization of the ISS beyond fiscal year 2015.*

Sec. 602. *International Space Station National Laboratory Advisory Committee.*

Sec. 603. *Contingency plan for cargo resupply.*

Sec. 604. *Sense of Congress on use of Space Life Sciences Laboratory at Kennedy Space Center.*

Subtitle B—Space Shuttle

Sec. 611. *Space Shuttle flight requirements.*

Sec. 612. *United States commercial cargo capability status.*

Sec. 613. *Space Shuttle transition.*

Sec. 614. Aerospace skills retention and investment reutilization report.

Sec. 615. Temporary continuation of coverage of health benefits.

Sec. 616. Accounting report.
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.

Sec. 703. Sense of Congress on EarthKAM and robotics competitions.

Sec. 704. Enhancement of educational role of NASA.

TITLE VIII—NEAR-EARTH OBJECTS

Sec. 801. Reaffirmation of policy.

Sec. 802. Findings.

Sec. 803. Requests for information.

Sec. 804. Establishment of policy with respect to threats posed by near-earth objects.

Sec. 805. Planetary radar capability.

Sec. 806. Arecibo observatory.

Sec. 807. International resources.

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.

Sec. 1004. Study and report on project assignment and work allocation of field centers.

TITLE XI—OTHER PROVISIONS

Sec. 1101. Space weather.

Sec. 1102. Initiation of discussions on development of framework for space traffic management.

Sec. 1103. Astronaut health care.

Sec. 1104. National Academies decadal surveys.

Sec. 1105. Innovation prizes.

Sec. 1106. Commercial space launch range study.

Sec. 1107. NASA outreach program.

Sec. 1108. Reduction-in-force moratorium.

Sec. 1109. Protection of scientific credibility, integrity, and communication within NASA.

Sec. 1110. Sense of Congress regarding the need for a robust workforce.

Sec. 1111. Methane inventory.

Sec. 1112. Exception to alternative fuel procurement requirement.

Sec. 1113. Sense of Congress on the importance of the NASA Office of Program Analysis and Evaluation.

Sec. 1114. Sense of Congress on elevating the importance of space and aeronautics within the Executive Office of the President.

Sec. 1115. Study on leasing practices of field centers.

Sec. 1116. Cooperative unmanned aerial vehicle activities.

Sec. 1117. Development of enhanced-use lease policy.

Sec. 1118. Sense of Congress with respect to the Michoud Assembly Facility and NASA's other centers and facilities.

Sec. 1119. Report on U.S. industrial base for launch vehicle engines.

Sec. 1120. Sense of Congress on precursor International Space Station research.

Sec. 1121. Limitation on funding for conferences.

Sec. 1122. Report on NASA efficiency and performance.

SEC. 2. FINDINGS.

The Congress finds, on this, the 50th anniversary of the establishment of the National Aero-

nautics 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 possible and to ensure the effective development of a United States heavy lift launch capability for missions beyond low Earth orbit.

(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.

There are authorized to be appropriated to NASA for fiscal year 2009 \$20,210,000,000, 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 Intra-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, \$4,886,000,000, of which—

(A) \$3,886,000,000 shall be for baseline exploration activities, of which \$100,000,000 shall be for the activities under sections 902(a)(4) and 902(d), such funds to remain available until expended; no less than \$1,101,400,000 shall be for the Orion Crew Exploration Vehicle; no less than \$1,018,500,000 shall be for Ares I Crew Launch Vehicle; and \$737,800,000 shall be for Advanced Capabilities, including \$106,300,000 for the Lunar Precursor Robotic Program (of which \$30,000,000 shall be for the lunar lander mission), \$276,500,000 shall be for International Space Station-related research and development activities, and \$355,000,000 shall be for research and development activities not related to the International Space Station; and

(B) \$1,000,000,000 shall be available to be used to accelerate the initial operating capability of the Orion Crew Exploration Vehicle and the Ares I Crew Launch Vehicle, to remain available until expended.

(4) For Education, \$128,300,000, of which \$14,200,000 shall be for the Experimental Program to Stimulate Competitive Research and \$32,000,000 shall be for the Space Grant program.

(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 research utilization of the International Space Station National Laboratory, 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, of which \$4,000,000 shall be for the program established under section 1107(a), to remain available until expended.

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

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, together with NOAA and other relevant agencies, provide United States leadership in developing and carrying out a cooperative international Earth observations-based research program.

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

(a) STUDY.—The Director of OSTP shall consult with NASA, NOAA, and other relevant agencies with an interest in Earth observations and 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 consult with all agencies referenced in the survey as responsible for spacecraft missions and 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 for NASA to conduct 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 coordi-

nation 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 NOAA and 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.

SEC. 208. TORNADOES AND OTHER SEVERE STORMS.

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 and other severe storms, tornado-force winds, and other factors determined to influence the development of tornadoes and other severe storms, with the goal of

improving the Nation's ability to predict tornadoes and other severe storms. Further, the Administrator shall examine whether there are additional cooperative activities with NOAA that should be undertaken in the area of tornado and severe storm research.

TITLE III—AERONAUTICS

SEC. 301. SENSE OF CONGRESS.

It is the sense of Congress that—

(1) aeronautics research continues to be an important core element of NASA's mission and should be supported;

(2) NASA aeronautics research should be guided by and consistent with the national policy to guide aeronautics research and development programs of the United States developed in accordance with section 101(c) of the National Aeronautics and Space Administration Authorization Act of 2005 (42 U.S.C. 16611); and

(3) technologies developed by NASA as described in paragraph (2) would help to secure the leadership role of the United States in global aviation and greatly enhance competitiveness of the United States in aeronautics in the future.

SEC. 302. 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. 303. RESEARCH ALIGNMENT.

In addition to pursuing the research and development initiative described in section 302, 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. 304. 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 appropriate sonic boom standards 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. The data could enable the promulgation of appropriate standards for overland commercial supersonic flight operations.

(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.

SEC. 305. 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 18 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 required in subsection (a).

SEC. 306. AVIATION WEATHER RESEARCH PLAN.

The Administrator and the Administrator of NOAA shall develop a collaborative research plan on convective weather events. The goal of the research is to significantly improve the reliability of 2-hour to 6-hour aviation weather forecasts. Within 270 days after the date of enactment of this Act, the Administrator and the Administrator of NOAA shall submit this plan to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives.

SEC. 307. 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. 308. ENHANCEMENT OF GRANT PROGRAM ON ESTABLISHMENT OF 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—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. When appropriate, the United States should lead confidence building measures that advance the long-term initiative for international cooperation.

SEC. 402. REAFFIRMATION OF EXPLORATION POLICY.

Congress hereby affirms its support for—

(1) the broad goals of the space exploration policy of the United States, including the eventual return to and exploration of the Moon and other destinations in the solar system and the important national imperative of independent access to space;

(2) the development of technologies and operational approaches that will enable a sustainable long-term program of human and robotic exploration of the solar system;

(3) activity related to Mars exploration, particularly for the development and testing of

technologies and mission concepts needed for eventual consideration of optional mission architectures, pursuant to future authority to proceed with the consideration and implementation of such architectures; and

(4) international participation and cooperation, as well as commercial involvement in space exploration activities.

SEC. 403. 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, including engaging international partners, 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. 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. 404. 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) **SENSE OF CONGRESS.**—It is the sense of Congress that NASA should make use of commercial services to the maximum extent practicable in support of its lunar outpost activities.

SEC. 405. 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 carry out a program of long-term exploration-related technology research and development, including such things as in-space propulsion, power systems, life support, and advanced avionics, that is not tied to specific flight projects. The program shall have the funding goal of ensuring that the technology research and development can be completed in a timely manner in order to support the safe, successful, and sustainable exploration of the solar system. In addition, in order to ensure that the broadest range of innovative concepts and technologies are captured, the long-term technology program shall have the goal of having a significant portion of its funding available for external grants and contracts with universities, research institutions, and industry.

SEC. 406. 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 sub-

section (a) not later than one year after the date of enactment of this Act.

SEC. 407. 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. 408. 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. As part of the technology plan, the Administrator shall examine the feasibility of having NASA enter into contracts and other agreements 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 and other agreements. In any such contracts and other agreements, NASA shall adhere to a transparent bidding process to award such contracts and other agreements, pursuant to United States law. As part of this plan, the Administrator shall include estimates of associated costs.

(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. 409. SCIENCE AND EXPLORATION.

It is the sense of Congress that NASA's scientific and human exploration activities are synergistic; 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.

SEC. 410. 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 space flight that will replace the Space Shuttle program.

TITLE V—SPACE SCIENCE**SEC. 501. TECHNOLOGY DEVELOPMENT.**

The Administrator shall establish an intra-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 intra-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 to the extent practicable and appropriate.

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-, and large-sized space science missions, and suborbital research activities, contributes to a robust and productive science program and serves as a catalyst for innovation.

SEC. 505. SUBORBITAL RESEARCH ACTIVITIES.

(a) SENSE OF CONGRESS.—It is the sense of Congress that suborbital flight activities, including the use of sounding rockets, aircraft, and high-altitude balloons, and suborbital reusable launch vehicles, 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. It is further the sense of Congress that funding for suborbital research activities should be considered part of the contribution of NASA to United States competitive and educational enhancement and should represent increased funding as contemplated in section 2001 of the America COMPETES Act (42 U.S.C. 16611(a)).

(b) REVIEW OF SUBORBITAL MISSION CAPABILITIES.—

(1) IN GENERAL.—Not later than 120 days after the date of enactment of this Act, the Administrator shall enter into an arrangement with the National Academies to conduct a review of the suborbital mission capabilities of NASA.

(2) MATTERS REVIEWED.—The review required by paragraph (1) shall include a review of the following:

(A) Existing programs that make use of suborbital flights.

(B) The status, capability, and availability of suborbital platforms, and the infrastructure and workforce necessary to support them.

(C) Existing or planned launch facilities for suborbital missions.

(D) Opportunities for scientific research, training, and educational collaboration in the conduct of suborbital missions by NASA, espe-

cially as they relate to the findings and recommendations of the National Academies decadal surveys and report on "Building a Better NASA Workforce: Meeting the Workforce Needs for the National Vision for Space Exploration".

(3) REPORT.—

(A) IN GENERAL.—Not later than 15 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 review required by this subsection.

(B) CONTENTS.—The report required by this paragraph shall include a summary of the review; the findings of the Administrator with respect to such review; recommendations regarding the growth of suborbital launch programs conducted by NASA; and the steps necessary to ensure such programs are conducted using domestic launch facilities to the maximum extent practicable, including any rationale and justification for using non-domestic facilities for such missions.

SEC. 506. 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. 507. ASSESSMENT OF IMPEDIMENTS TO INTERAGENCY COOPERATION ON SPACE AND EARTH SCIENCE MISSIONS.

(a) ASSESSMENTS.—The Administrator, in consultation with other agencies with space science programs, shall enter into an arrangement with the National Academies to assess impediments, including cost growth, to the successful conduct of interagency cooperation on space science missions, to provide lessons learned and best practices, and to recommend steps to help facilitate successful interagency collaborations on space science missions. As part of the same arrangement with the National Academies, the Administrator, in consultation with NOAA and other agencies with civil Earth observation systems, shall have the National Academies assess impediments, including cost growth, to the successful conduct of interagency cooperation on Earth science missions, to provide lessons learned and best practices, and to recommend steps to help facilitate successful interagency collaborations on Earth science missions.

(b) REPORT.—The report of the assessments 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. 508. 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-, and small-sized 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. 509. 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 diver-

sity 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. PLAN TO SUPPORT OPERATION AND UTILIZATION OF THE ISS BEYOND FISCAL YEAR 2015.**

(a) IN GENERAL.—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 2015.

(b) PLAN TO SUPPORT OPERATIONS AND UTILIZATION OF THE INTERNATIONAL SPACE STATION BEYOND FISCAL YEAR 2015.—

(1) IN GENERAL.—Not later than 9 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 plan to support the operations and utilization of the International Space Station beyond fiscal year 2015 for a period of not less than 5 years. The plan shall be an update and expansion of the operation plan of the International Space Station National Laboratory submitted to Congress in May 2007 under section 507 of the National Aeronautics and Space Administration Authorization Act of 2005 (42 U.S.C. 16767).

(2) CONTENT.—

(A) REQUIREMENTS TO SUPPORT OPERATION AND UTILIZATION OF THE ISS BEYOND FISCAL YEAR 2015.—As part of the plan required in paragraph (1), the Administrator shall provide each of the following:

(i) A list of critical hardware necessary to support International Space Station operations through the year 2020.

(ii) Specific known or anticipated maintenance actions that would need to be performed to support International Space Station operations and research through the year 2020.

(iii) Annual upmass and downmass requirements, including potential vehicles that will deliver such upmass and downmass, to support the International Space Station after the retirement of the Space Shuttle Orbiter and through the year 2020.

(B) ISS NATIONAL LABORATORY RESEARCH MANAGEMENT PLAN.—As part of the plan required in paragraph (1), the Administrator shall develop a Research Management Plan for the International Space Station. Such 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. Such Plan shall be used to prioritize resources such as crew time, racks and equipment, and United States access to international research facilities and equipment. Such 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. Such Plan shall be developed in consultation with other Federal agencies, academia, industry, and other relevant stakeholders. The Administrator may request the support of the National Academy of Sciences or other appropriate independent entity, including an external consultant, in developing the Plan.

(C) **ESTABLISHMENT OF PROCESS FOR ACCESS TO NATIONAL LABORATORY.**—As part of the plan required in paragraph (1), the Administrator shall—

(i) 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

(ii) 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.

(D) **ASSESSMENT OF EQUIPMENT TO SUPPORT RESEARCH.**—As part of the plan required in paragraph (1), the Administrator shall—

(i) provide a list of critical hardware that is anticipated to be necessary to support nonexploration-related and exploration-related research through the year 2020;

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

(iii) 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.

(E) **BUDGET PLAN.**—As part of the plan required in paragraph (1), the Administrator shall provide a budget plan that reflects the anticipated use of such activities and the projected amounts to be required for fiscal years 2010 through 2020 to accomplish the objectives of the activities described in subparagraphs (A) through (D).

SEC. 602. INTERNATIONAL SPACE STATION NATIONAL LABORATORY ADVISORY COMMITTEE.

(a) **ESTABLISHMENT.**—Not later than 1 year after the date of enactment of this Act, the Administrator shall establish under the Federal Advisory Committee Act a committee to be known as the “International Space Station National Laboratory Advisory Committee” (hereafter in this section referred to as the “Committee”).

(b) **MEMBERSHIP.**—

(1) **COMPOSITION.**—The Committee shall be composed of individuals representing organizations who have formal agreements with NASA to utilize the United States portion of the International Space Station, including allocations within partner elements.

(2) **CHAIR.**—The Administrator shall appoint a chair from among the members of the Committee, who shall serve for a 2-year term.

(c) **DUTIES OF THE COMMITTEE.**—

(1) **IN GENERAL.**—The Committee shall monitor, assess, and make recommendations regarding effective utilization of the International Space Station as a national laboratory and platform for research.

(2) **ANNUAL REPORT.**—The Committee shall submit to the Administrator, on an annual basis or more frequently as considered necessary by a majority of the members of the Committee, a report containing the assessments and recommendations required by paragraph (1).

(d) **DURATION.**—The Committee shall exist for the life of the International Space Station.

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.

SEC. 604. SENSE OF CONGRESS ON USE OF SPACE LIFE SCIENCES LABORATORY AT KENNEDY SPACE CENTER.

It is the sense of Congress that the Space Life Sciences Laboratory at Kennedy Space Center represents a key investment and asset in the International Space Station National Laboratory capability. The laboratory is specifically designed to provide pre-flight, in-flight, and post-flight support services for International Space Station end-users, and should be utilized in this manner when appropriate.

Subtitle B—Space Shuttle

SEC. 611. SPACE SHUTTLE FLIGHT REQUIREMENTS.

(a) **REPORT ON U.S. HUMAN SPACEFLIGHT CAPABILITIES.**—Section 501(c) of the National Aeronautics and Space Administration Authorization Act of 2005 (42 U.S.C. 16761(c)) is amended by striking the matter before paragraph (1) and inserting the following: “Not later than 90 days after the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2008, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives a report on the lack of a United States human space flight system to replace the Space Shuttle upon its planned retirement, currently scheduled for 2010, and the ability of the United States to uphold the policy described in subsection (a), including a description of—”.

(b) **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, currently scheduled for 2010.

(c) **ADDITIONAL FLIGHT TO DELIVER THE ALPHA MAGNETIC SPECTROMETER AND OTHER SCIENTIFIC EQUIPMENT AND PAYLOADS TO THE INTERNATIONAL SPACE STATION.**—

(1) **IN GENERAL.**—In addition to the flying of the baseline manifest as described in subsection (b), the Administrator shall take all necessary steps to fly one additional Space Shuttle flight to deliver the Alpha Magnetic Spectrometer and other scientific equipment and payloads to the International Space Station prior to the retirement of the Space Shuttle. The purpose of the mission required to be planned under this subsection shall be to ensure the active use of the United States portion of the International Space Station as a National Laboratory by the delivery of the Alpha Magnetic Spectrometer, and to the extent practicable, the delivery of flight-ready research experiments prepared under the Memoranda of Understanding between NASA and other entities to facilitate the utilization of the International Space Station National Laboratory, as well as other fundamental and applied life sciences and other microgravity research experiments to the International Space Station as soon as the assembly of the International Space Station is completed.

(2) **FLIGHT SCHEDULE.**—If the Administrator, within 12 months before the scheduled date of

the additional Space Shuttle flight authorized by paragraph (1), determines that—

(A) NASA will be unable to meet that launch date before the end of calendar year 2010, unless the President decides to extend Shuttle operations beyond 2010, or

(B) implementation of the additional flight requirement would, in and of itself, result in—

(i) significant increased costs to NASA over the cost estimate of the additional flight as determined by the Independent Program Assessment Office, or

(ii) unacceptable safety risks associated with making the flight before termination of the Space Shuttle program,

the Administrator shall notify the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science and Technology of the determination, and provide a detailed explanation of the basis for that determination. After the notification is provided to the Committees, the Administrator shall remove the flight from the Space Shuttle schedule unless the Congress by law reauthorizes the flight or the President certifies that it is in the national interest to fly the mission.

(d) **TERMINATION OR SUSPENSION OF ACTIVITIES THAT WOULD PRECLUDE CONTINUED FLIGHT OF SPACE SHUTTLE PRIOR TO REVIEW BY THE INCOMING 2009 PRESIDENTIAL ADMINISTRATION.**—

(1) **IN GENERAL.**—The Administrator shall terminate or suspend any activity of the Agency that, if continued between the date of enactment of this Act and April 30, 2009, would preclude the continued safe and effective flight of the Space Shuttle after fiscal year 2010 if the first President inaugurated on January 20, 2009, were to make a determination to delay the Space Shuttle’s scheduled retirement.

(2) **REPORT ON IMPACT OF COMPLIANCE.**—Within 90 days after the date of enactment of this Act, the Administrator shall provide a report to the Congress describing the expected budgetary and programmatic impacts from compliance with paragraph (1). The report shall include—

(A) a summary of the actions taken to ensure the option to continue space shuttle flights beyond the end of fiscal year 2010 is not precluded before April 30, 2009;

(B) an estimate of additional costs incurred by each specific action identified in the summary provided under subparagraph (A);

(C) a description of the proposed plan for allocating those costs among anticipated fiscal year 2009 appropriations or existing budget authority;

(D) a description of any programmatic impacts within the Space Operations Mission Directorate that would result from reallocations of funds to meet the requirements of paragraph (1);

(E) a description of any additional authority needed to enable compliance with the requirements of paragraph (1); and

(F) a description of any potential disruption to the timely progress of development milestones in the preparation of infrastructure or workforce requirements for shuttle follow-on launch systems.

(e) **REPORT ON IMPACTS OF SPACE SHUTTLE EXTENSION.**—Within 120 days after the date of enactment of this Act, the Administrator shall provide a report to the Congress outlining options, impacts, and associated costs of ensuring the safe and effective operation of the Space Shuttle at the minimum rate necessary to support International Space Station operations and resupply, including for both a near-term, 1-to-2 year extension of Space Shuttle operations and for a longer term, 3-to-6 year extension. The report shall include an assessment of—

(1) annual fixed and marginal costs, including identification and cost impacts of options for cost-sharing with the Constellation program and including the impact of those cost-sharing options on the Constellation program;

(2) the safety of continuing the use of the Space Shuttle beyond 2010, including a probability risk assessment of a catastrophic accident before completion of the extended Space Shuttle flight program, the underlying assumptions used in calculating that probability, and comparing the associated safety risks with those of other existing and planned human-rated launch systems, including the Soyuz and Constellation vehicles;

(3) a description of the activities and an estimate of the associated costs that would be needed to maintain or improve Space Shuttle safety throughout the periods described in the first sentence of this subsection were the President inaugurated on January 20, 2009, to extend Space Shuttle operations beyond 2010, the correctly anticipated date of Space Shuttle retirement;

(4) the impacts on facilities, workforce, and resources for the Constellation program and on the cost and schedule of that program;

(5) assumptions regarding workforce, skill mix, launch and processing infrastructure, training, ground support, orbiter maintenance and vehicle utilization, and other relevant factors, as appropriate, used in deriving the cost and schedule estimates for the options studied;

(6) the extent to which program management, processes, and workforce and contractor assignments can be integrated and streamlined for maximum efficiency to support continued shuttle flights while transitioning to the Constellation program, including identification of associated cost impacts on both the Space Shuttle and the Constellation program;

(7) the impact of a Space Shuttle flight program extension on the United States' dependence on Russia for International Space Station crew rescue services; and

(8) the potential for enhancements of International Space Station research, logistics, and maintenance capabilities resulting from extended Shuttle flight operations and the costs associated with implementing any such enhancements.

SEC. 612. UNITED STATES COMMERCIAL CARGO CAPABILITY STATUS.

The Administrator shall determine the degree to which an increase in the amounts authorized to be appropriated under section 101(3) for the Commercial Orbital Transportation Services project to be used by Phase One team members of such project in fiscal year 2009 would reasonably be expected to accelerate development of Capabilities A, B, and C of such project to an effective operations capability as close to 2010 as possible.

SEC. 613. SPACE SHUTTLE TRANSITION.

(a) **DISPOSITION OF SHUTTLE-RELATED ASSETS.**—

(1) **IN GENERAL.**—Not later than 90 days after the date of enactment of this Act, the Administrator shall submit to Congress a plan describing the process for the disposition of the remaining Space Shuttle Orbiters and other Space Shuttle program-related hardware after the retirement of the Space Shuttle fleet.

(2) **PLAN REQUIREMENTS.**—The plan submitted under paragraph (1) shall include a description of a process by which educational institutions, science museums, and other appropriate organizations may acquire, through loan or disposal by the Federal Government, Space Shuttle program hardware.

(3) **PROHIBITION ON DISPOSITION BEFORE COMPLETION OF PLAN.**—The Administrator shall not dispose of any Space Shuttle program hardware before the plan required by paragraph (1) is submitted to Congress.

(b) **SPACE SHUTTLE TRANSITION LIAISON OFFICE.**—

(1) **ESTABLISHMENT.**—The Administrator shall develop a plan and establish a Space Shuttle Transition Liaison Office within the Office of Human Capital Management of NASA to assist local communities affected by the termination of

the Space Shuttle program in mitigating the negative impacts on such communities caused by such termination. The plan shall define the size of the affected local community that would receive assistance described in paragraph (2).

(2) **MANNER OF ASSISTANCE.**—In providing assistance under paragraph (1), the office established under such paragraph shall—

(A) offer nonfinancial, technical assistance to communities described in such paragraph to assist in the mitigation described in such paragraph; and

(B) serve as a clearinghouse to assist such communities in identifying services available from other Federal, State, and local agencies to assist in such mitigation.

(3) **TERMINATION OF OFFICE.**—The office established under paragraph (1) shall terminate 2 years after the completion of the last Space Shuttle flight.

(4) **SUBMISSION.**—Not later than 180 days after the date of enactment of this Act, NASA shall provide a copy of the plan required by paragraph (1) to the Congress.

SEC. 614. AEROSPACE SKILLS RETENTION AND INVESTMENT REUTILIZATION REPORT.

(a) **IN GENERAL.**—The Administrator shall, in consultation with other Federal agencies, as appropriate—

(1) carry out an analysis of the facilities and human capital resources that will become available as a result of the retirement of the Space Shuttle program; and

(2) identify on-going or future Federal programs and projects that could use such facilities and resources.

(b) **REPORT.**—Not later than 180 days 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—

(1) on the analysis required by paragraph (1) of subsection (a), including the findings of the Administrator with respect to such analysis; and

(2) describing the programs and projects identified under paragraph (2) of such subsection.

SEC. 615. TEMPORARY CONTINUATION OF COVERAGE OF HEALTH BENEFITS.

(a) **IN GENERAL.**—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) **CONFORMING AMENDMENT.**—Paragraph (1)(A) of such subsection (d) is amended by striking “(4) and (5)” and inserting “(4), (5), and (6)”.

SEC. 616. ACCOUNTING REPORT.

Within 180 days after the date of enactment of this Act, the Administrator shall provide 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 that will summarize any actions taken or planned to be taken during fiscal years 2008 and 2009 to begin reductions in expenditures and activities related to the Space Shuttle program. The report shall include a summary of any actual or anticipated cost savings to the Space Shuttle program relative to the FY 2008 and FY 2009 Space Shuttle program budgets and runout projections as a result of such actions, as well as a summary of any actual or anticipated liens or budgetary challenges to the Space Shuttle program during fiscal years 2008 and 2009.

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.

SEC. 703. SENSE OF CONGRESS ON EARTHKAM AND ROBOTICS COMPETITIONS.

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 the International Space Station and to 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.

SEC. 704. ENHANCEMENT OF EDUCATIONAL ROLE OF NASA.

(a) SENSE OF CONGRESS.—It is the sense of Congress that the International Space Station offers a unique opportunity for Federal agencies to engage students in science, technology, engineering, and mathematics education. Congress encourages NASA to include other Federal agencies in its planning efforts to use the International Space Station National Laboratory for science, technology, engineering, and mathematics educational activities.

(b) EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESEARCH.—In order to ensure that research expertise and talent throughout the Nation is developed and engaged in NASA research and education activities, NASA shall, as part of its annual budget submission, detail additional steps that can be taken to further integrate the participating EPSCoR States in both existing and new or emerging NASA research programs and center activities.

(c) NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM.—NASA shall continue its emphasis on the importance of education to expand opportunities for Americans to understand and participate in NASA's aeronautics and space projects by supporting and enhancing science and engineering education, research, and public outreach efforts.

TITLE VIII—NEAR-EARTH OBJECTS**SEC. 801. REAFFIRMATION OF POLICY.**

(a) REAFFIRMATION OF POLICY ON SURVEYING NEAR-EARTH ASTEROIDS AND COMETS.—Congress reaffirms the policy set forth in section 102(g) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2451(g)) (relating to surveying near-Earth asteroids and comets).

(b) SENSE OF CONGRESS ON BENEFITS OF NEAR-EARTH OBJECT PROGRAM ACTIVITIES.—It is the sense of Congress that the near-Earth object program activities of NASA will provide benefits to the scientific and exploration activities of NASA.

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; 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 WITH RESPECT TO THREATS POSED BY NEAR-EARTH OBJECTS.

Within 2 years after the date of enactment of this Act, the Director of the 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 risk; and

(2) recommend a Federal agency or agencies to be responsible for—

(A) protecting the United States from a near-Earth object that is expected to collide with Earth; and

(B) implementing a deflection campaign, in consultation with international bodies, should one be necessary.

SEC. 805. PLANETARY RADAR CAPABILITY.

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

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, using funds authorized in section 101(a)(1)(B), 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.

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.

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. It is further the sense of Congress that United States entrepreneurial space compa-

nies 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.

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 2 or more commercial entities for a Phase 1 Commercial Orbital Transportation Services crewed vehicle demonstration program.

(b) 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(3)(A), and for future fiscal years, for Orion Crew Exploration Vehicle development, Ares I Crew Launch Vehicle development, or International Space Station cargo delivery.

(c) ADDITIONAL TECHNOLOGIES.—NASA shall make International Space Station-compatible docking adaptors and other relevant technologies available to the commercial crew providers selected to service the International Space Station.

(d) 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.

SEC. 1004. STUDY AND REPORT ON PROJECT ASSIGNMENT AND WORK ALLOCATION OF FIELD CENTERS.

(a) **STUDY.**—

(1) **IN GENERAL.**—Not later than 180 days after the date of enactment of this Act, the Administrator shall complete a study of all field centers of NASA, including the Michoud Assembly Facility.

(2) **MATTERS STUDIED.**—The study required by paragraph (1) shall include the mission and future roles and responsibilities of the field centers, including the Michoud Assembly Facility, described in paragraph (1).

(b) **REPORT.**—

(1) **IN GENERAL.**—Not later than 180 days after the date of enactment of this Act, the Administrator shall submit to the appropriate congressional committees a report on the study required by subsection (a)(1).

(2) **CONTENT.**—The report required by paragraph (1) shall include the following:

(A) A comprehensive analysis of the work allocation of all field centers of NASA, including the Michoud Assembly Facility.

(B) A description of the program and project roles, functions, and activities assigned to each field center, including the Michoud Assembly Facility.

(C) Details on how field centers, including the Michoud Assembly Facility, are selected and designated for lead and support role work assignments (including program and contract management assignments).

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) **ASSESSMENT OF THE IMPACT OF SPACE WEATHER ON AVIATION.**—

(1) **STUDY.**—The Director of OSTP 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 a minimum, 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; and

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

(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. INITIATION OF DISCUSSIONS ON DEVELOPMENT OF FRAMEWORK FOR SPACE TRAFFIC MANAGEMENT.

(a) **FINDING.**—Congress finds that as more countries acquire the capability 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 countries.

(b) **DISCUSSIONS.**—The Administrator shall, in consultation with such other agencies of the Federal Government as the Administrator considers appropriate, initiate discussions with the appropriate representatives of other space-faring countries to determine 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. 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. 1104. 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. 1105. 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. 1106. 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 space launch ranges 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. 1107. NASA OUTREACH PROGRAM.

(a) **ESTABLISHMENT.**—NASA shall competitively select an organization to partner with NASA centers, aerospace contractors, and academic institutions to carry out a program to help promote the competitiveness of small, minority-owned, and women-owned businesses in communities across the United States through enhanced insight into the technologies of NASA's space and aeronautics programs. The program shall support the mission of NASA's Innovative Partnerships Program with its emphasis on 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 the enhanced insight of the private sector into NASA's technologies in order to increase the competitiveness of the private sector in producing viable commercial products.

(2) Creating a network of academic institutions, aerospace contractors, and NASA centers that will commit to donating appropriate technical assistance to small businesses, giving preference to socially and economically disadvantaged small business concerns, small business concerns owned and controlled by service-disabled veterans, and HUBZone small business concerns. This paragraph shall not apply to any contracting actions entered into or taken by NASA.

(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.

SEC. 1108. 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 before December 31, 2010, except for cause on charges of misconduct, delinquency, or inefficiency.

SEC. 1109. PROTECTION OF SCIENTIFIC CREDIBILITY, INTEGRITY, AND COMMUNICATION WITHIN NASA.

(a) **SENSE OF THE CONGRESS.**—It is the sense of Congress that NASA should not dilute, distort, suppress, or impede scientific research or the dissemination thereof.

(b) **STUDY.**—Within 60 days after the date of enactment of this Act, the Comptroller General shall—

(1) initiate a study to be completed within 270 days to determine whether the regulations set forth in part 1213 of title 14, Code of Federal Regulations, are being implemented in a clear and consistent manner by NASA to ensure the dissemination of research; and

(2) transmit a report to the Congress setting forth the Comptroller General's findings, conclusions, and recommendations.

(c) **RESEARCH.**—The Administrator shall work to ensure that NASA's policies on the sharing of

climate related data respond to the recommendations of the Government Accountability Office's report on climate change research and data-sharing policies and to the recommendations on the processing, distribution, and archiving of data by the National Academies Earth Science Decadal Survey, "Earth Science and Applications from Space", and other relevant National Academies reports, to enhance and facilitate their availability and widest possible use to ensure public access to accurate and current data on global warming.

SEC. 1110. 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.

SEC. 1111. METHANE INVENTORY.

Within 12 months after the date of enactment of this Act, the Director of OSTP, in conjunction with the Administrator, the Administrator of NOAA, and other appropriate Federal agencies and academic institutions, shall develop a plan, including a cost estimate and timetable, and initiate an inventory of natural methane stocks and fluxes in the polar region of the United States.

SEC. 1112. 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.

SEC. 1113. SENSE OF CONGRESS ON THE IMPORTANCE OF THE NASA OFFICE OF PROGRAM ANALYSIS AND EVALUATION.

(a) **OFFICE OF PROGRAM ANALYSIS AND EVALUATION.**—It is the sense of Congress that it is important for NASA to maintain an Office of Program Analysis and Evaluation that has as its mission:

(1) To develop strategic plans for NASA in accordance with section 306 of title 5, United States Code.

(2) To develop annual performance plans for NASA in accordance with section 1115 of title 31, United States Code.

(3) To provide analysis and recommendations to the Administrator on matters relating to the planning and programming phases of the Planning, Programming, Budgeting, and Execution system of NASA.

(4) To provide analysis and recommendations to the Administrator on matters relating to acquisition management and program oversight, including cost-estimating processes, contractor cost reporting processes, and contract performance assessments.

(b) **OBJECTIVES.**—It is further the sense of Congress that in performing those functions, the objectives of the Office should be the following:

(1) To align NASA's mission, strategic plan, budget, and performance plan with strategic goals and institutional requirements of NASA.

(2) To provide objective analysis of programs and institutions of NASA—

(A) to generate investment options for NASA; and

(B) to inform strategic decision making in NASA.

(3) To enable cost-effective, strategically aligned execution of programs and projects by NASA.

(4) To perform independent cost estimation in support of NASA decision making and establishment of standards for agency cost analysis.

(5) To ensure that budget formulation and execution are consistent with strategic investment decisions of NASA.

(6) To provide independent program and project reviews that address the credibility of technical, cost, schedule, risk, and management approaches with respect to available resources.

(7) To facilitate progress by NASA toward meeting the commitments of NASA.

SEC. 1114. SENSE OF CONGRESS ON ELEVATING THE IMPORTANCE OF SPACE AND AERONAUTICS WITHIN THE EXECUTIVE OFFICE OF THE PRESIDENT.

It is the sense of Congress that the President should elevate the importance of space and aeronautics within the Executive Office of the President by organizing the interagency focus on space and aeronautics matters in as effective a manner as possible, such as by means of the National Space Council authorized by section 501 of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1989 (42 U.S.C. 2471) or other appropriate mechanisms.

SEC. 1115. STUDY ON LEASING PRACTICES OF FIELD CENTERS.

(a) **STUDY.**—Not later than 180 days after the date of enactment of this Act, the Administrator shall complete a study on the leasing practices of all field centers of NASA, including the Michoud Assembly Facility. Such study shall include the following:

(1) The method by which overhead maintenance expenses are distributed among tenants of such field centers.

(2) Identification of the impacts of such method on attracting businesses and partnerships to such field centers.

(3) Identification of the steps that can be taken to mitigate any adverse impacts identified under paragraph (2).

(b) **REPORT.**—Not later than 180 days 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 study required by subsection (a), including the following:

(1) The findings of the Administrator with respect to such study.

(2) A description of the impacts identified under subsection (a)(2).

(3) The steps identified under subsection (a)(3).

SEC. 1116. COOPERATIVE UNMANNED AERIAL VEHICLE ACTIVITIES.

The Administrator, in cooperation with the Administrator of NOAA and in coordination with other agencies that have existing civil capabilities, shall continue to utilize the capabilities of unmanned aerial vehicles as appropriate in support of NASA and interagency cooperative missions. The Administrator may enter into cooperative agreements with universities with unmanned aerial vehicle programs and related assets to conduct collaborative research and development activities, including development of appropriate applications of small unmanned aerial vehicle technologies and systems in remote areas.

SEC. 1117. DEVELOPMENT OF ENHANCED-USE LEASE POLICY.

(a) IN GENERAL.—The Administrator shall develop an agency-wide enhanced-use lease policy that—

(1) is based upon sound business practices and lessons learned from the demonstration centers; and

(2) establishes controls and procedures to ensure accountability and protect the interests of the Government.

(b) CONTENTS.—The policy required by subsection (a) shall include the following:

(1) Criteria for determining whether enhanced-use lease provides better economic value to the Government than other options, such as—

(A) Federal financing through appropriations; or

(B) sale of the property.

(2) Requirement for the identification of proposed physical and procedural changes needed to ensure security and restrict access to specified areas, coordination of proposed changes with existing site tenants, and development of estimated costs of such changes.

(3) Measures of effectiveness for the enhanced-use lease program.

(4) Accounting controls and procedures to ensure accountability, such as an audit trail and documentation to readily support financial transactions.

(c) ANNUAL REPORT.—Section 315(f) of the National Aeronautics and Space Administration Act of 1958 (42 U.S.C. 2459j(f)) is amended to read as follows:

“(f) REPORTING REQUIREMENTS.—The Administrator shall submit an annual report by January 31st of each year. Such report shall include the following:

“(1) Information that identifies and quantifies the value of the arrangements and expenditures of revenues received under this section.

“(2) The availability and use of funds received under this section for the Agency’s operating plan.”.

(d) DISTRIBUTION OF CASH CONSIDERATION RECEIVED.—

(1) IN GENERAL.—Section 315(b)(3)(B) of such Act (42 U.S.C. 2459j(b)(3)(B)) is amended to read as follows:

“(B) Of any amounts of cash consideration received under this subsection that are not utilized in accordance with subparagraph (A)—

“(i) 35 percent shall be deposited in a capital asset account to be established by the Administrator, shall be available for maintenance, capital revitalization, and improvements of the real property assets and related personal property under the jurisdiction of the Administrator, and shall remain available until expended; and

“(ii) the remaining 65 percent shall be available to the respective center or facility of the Administration engaged in the lease of non-excess real property, and shall remain available until expended for maintenance, capital revitalization, and improvements of the real property assets and related personal property at the respective center or facility subject to the concurrence of the Administrator.”.

(2) CONFORMING AMENDMENTS.—Section 533 of the Consolidated Appropriations Act, 2008 (Public Law 110-161; 121 Stat. 1931) is amended—

(A) by amending subsection (b)(4) to read as follows:

“(4) in paragraph (2), as redesignated by paragraph (3) of this subsection, by adding at the end the following new subparagraph:

“(C) Amounts utilized under subparagraph (B) may not be utilized for daily operating costs.”; and

(B) in subsection (d)—

(i) by striking “the following new subsection (f)” and inserting “the following new subsection”;

(ii) in the quoted matter, by redesignating subsection (f) as subsection (g).

SEC. 1118. SENSE OF CONGRESS WITH RESPECT TO THE MICHOUX ASSEMBLY FACILITY AND NASA’S OTHER CENTERS AND FACILITIES.

It is the sense of Congress that the Michoud Assembly Facility represents a unique resource in the facilitation of the Nation’s exploration programs and that every effort should be made to ensure the effective utilization of that resource, as well as NASA’s other centers and facilities.

SEC. 1119. REPORT ON U.S. INDUSTRIAL BASE FOR LAUNCH VEHICLE ENGINES.

Not later than 180 days after the date of Enactment of this Act, the Director of the Office of Science and Technology Policy shall submit to Congress a report setting forth the assessment of the Director as to the capacity of the United States industrial base for development and production of engines to meet United States Government and commercial requirements for space launch vehicles. The Report required by this section shall include information regarding existing, pending, and planned engine developments across a broad spectrum of thrust capabilities, including propulsion for sub-orbital, small, medium, and heavy-lift space launch vehicles.

SEC. 1120. SENSE OF CONGRESS ON PRECURSOR INTERNATIONAL SPACE STATION RESEARCH.

It is the Sense of Congress that NASA is taking positive steps to utilize the Space Shuttle as a platform for precursor International Space Station research by maximizing to the extent practicable the use of middeck accommodations, including soft stowage, for near-term scientific and commercial applications on remaining Space Shuttle flights, and the Administrator is strongly encouraged to continue to promote the effective utilization of the Space Shuttle for precursor research within the constraints of the International Space Station assembly requirements.

SEC. 1121. LIMITATION ON FUNDING FOR CONFERENCES.

(a) IN GENERAL.—There are authorized to be appropriated not more than \$5,000,000 for any expenses related to conferences, including conference programs, travel costs, and related expenses. No funds authorized under this Act may be used to support a Space Flight Awareness Launch Honoree Event conference. The total amount of the funds available under this Act for other Space Flight Awareness Honoree-related activities in fiscal year 2009 may not exceed ½ of the total amount of funds from all sources obligated or expended on such activities in fiscal year 2008.

(b) QUARTERLY REPORTS.—The Administrator shall submit quarterly reports to the Inspector General of NASA regarding the costs and contracting procedures relating to each conference held by NASA during fiscal year 2009 for which the cost to the Government is more than \$20,000. Each report shall include, for each conference described in that subsection held during the applicable quarter—

(1) a description of the subject of and number of participants attending, the conference, including the number of NASA employees attending and the number of contractors attending at agency expense;

(2) a detailed statement of the costs to the Government relating to the conference, including—

(A) the cost of any food or beverages;

(B) the cost of any audio-visual services; and

(C) a discussion of the methodology used to determine which costs relate to the conference; and

(D) cost of any room, board, travel, and per diem expenses; and

(3) a description of the contracting procedures relating to the conference, including—

(A) whether contracts were awarded on a competitive basis for that conference; and

(B) a discussion of any cost comparison conducted by NASA in evaluating potential contractors for that conference.

SEC. 1122. REPORT ON NASA EFFICIENCY AND PERFORMANCE.

(a) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Comptroller General of the United States shall submit to Congress a report that contains a review of NASA programs and associated activities with an annual funding level of more than \$50,000,000 that appear to be similar in scope and purpose to other activities within the Federal government, that includes—

(1) a brief description of each NASA program reviewed and its subordinate activities;

(2) the annual and cumulative appropriation amounts expended for each program reviewed and its subordinate activities since fiscal year 2005;

(3) a brief description of each Federal program and its subordinate activities that appears to have a similar scope and purpose to a NASA program; and

(4) a review of the formal and informal processes by which NASA coordinates with other Federal agencies to ensure that its programs and activities are not duplicative of similar efforts within the Federal government and that the programs and activities meet the core mission of NASA, and the degree of transparency and accountability afforded by those processes.

(b) DUPLICATIVE PROGRAMS.—If the Comptroller General determines, under subsection (a)(4), that any deficiency exists in the NASA procedures intended to avoid or eliminate conflict or duplication with other Federal agency activities, the Comptroller General shall include a recommendation as to how such procedures should be modified to ensure similar programs and associated activities can be consolidated, eliminated, or streamlined within NASA or within other Federal agencies to improve efficiency.

The SPEAKER pro tempore. Pursuant to the rule, the gentleman from Tennessee (Mr. GORDON) and the gentleman from Texas (Mr. HALL) each will control 20 minutes.

The Chair recognizes the gentleman from Tennessee.

GENERAL LEAVE

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

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

There was no objection.

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

Mr. Speaker, I rise today to speak in strong support of H.R. 6063, the NASA Authorization Act of 2008, as amended by the Senate. As you know, the House first passed H.R. 6063 on June 18 by an overwhelming vote of 409-15. After receiving this strong bipartisan mandate, we worked with our counterparts in the Senate over the summer to ensure that the legislation before us today would continue to reflect the priorities and policies endorsed by this body.

I believe that we succeeded in that effort, and I want to express my appreciation to the Space and Aeronautics Subcommittee Chair, Mr. MARK UDALL, for his leadership in introducing this

bill and successfully shepherding it through the legislative process.

I also want to thank my friends on the minority, Ranking Member RALPH HALL and subcommittee Ranking Member TOM FEENEY for their constructive participation in the development of this legislation. Of course, I want to express my appreciation to Senators BILL NELSON and DAVID VITTER for their efforts in helping to forge the bipartisan compromise that we will be voting on today.

Finally, I want to thank the House and Senate staff on both sides of the aisle who tirelessly supported our efforts to get this legislation developed and enacted. In that regard I want to specifically recognize Dick Obermann, the staff director of the Space and Aeronautics Subcommittee; Pam Whitney, Allen Li, Devin Bryant, John Piazza and Wendy Adams of the committee's majority staff; as well as Ed Feddeman, Ken Monroe, Lee Arnold and Katy Crooks of the committee's minority staff.

Mr. Speaker, I believe that the characterization of H.R. 6063 that I gave back in June is still very valid. The legislation before us today retains the key provisions and principles of that earlier version of the bill. As a result, I will not spend our limited time today describing the provisions of H.R. 6063 in detail. Instead, I would simply like to make the following points.

H.R. 6063 is a fiscally responsible measure that sends a strong message to the next administration that Congress believes that investing in a balanced NASA program of science, aeronautics and human space flight and exploration is important and worthy of our Nation's support. I think that it is a valuable message for this Congress to send, especially as we witness the emergence of other spacefaring nations in the world who clearly recognize the value of such investments.

This bill contains a number of provisions to ensure that NASA has properly structured human space flight, science and exploration programs that can deliver significant technological, scientific and geopolitical benefits to this Nation.

H.R. 6063 also demonstrates that NASA's capabilities and programs are relevant to meeting our needs back here on Earth and that properly utilized, those capabilities and programs can deliver a significant societal economic return to our investment in NASA.

This legislation includes provisions to ensure the future health of the Nation's aviation system and to develop the tools needed to better understand and respond to the challenges of climate change and the contribution to achievement of our Nation's innovative agenda.

The bill before us today is not identical to the one we passed in June, although it certainly retains the key provisions of the earlier version of this legislation. For example, it did not

prove possible to retain the OSTP study of the impact of current export policies on commercial and civil space activities. I think it is very important that such a review occur, and I am disappointed that the provisions had to be dropped. But I am encouraged that there is likely to be movement on this issue once the next administration takes office.

In terms of additions to the earlier versions of H.R. 6063, this bill contains a prohibition against NASA taking any steps prior to April 30th of next year that would preclude the President from being able to continue to fly the Space Shuttle past 2010. That provision should not be construed as a congressional endorsement of extending the life of the shuttle program beyond the additional flight added by this bill to deliver the AMS to the International Space Station. Rather, it reflects our common belief that the decision of whether or not to extend the shuttle past its planned 2010 retirement date should be left to the next President and Congress, especially since both of the Presidential candidates have asked for that flexibility to make that decision.

In addition, NASA has indicated that delaying the shuttle shutdown activities until at least April 30 of next year will not impose additional costs on the agency. So, on balance, I believe this is a reasonable provision to include in this amended version of H.R. 6063.

Mr. Speaker, the House-passed version of H.R. 6063 was endorsed by a host of organizations, ranging from the Association of American Universities to the National Association of Manufacturers. I believe that they would agree that H.R. 6063, as amended by the Senate, is equally worthy of that support.

As I mentioned earlier, we have worked hard to retain the key features of the House-passed bill, and I believe we are very successful in that effort.

Mr. Speaker, next Wednesday marks the 50th anniversary of the day that the National Aeronautics and Space Administration officially opened for business. I can think of no more fitting birthday present that Congress could bestow than this legislation, the NASA Authorization Act of 2008, because it provides direction and support for the agency that will enable NASA during the next 50 years to be as productive and exciting as it was in the last 50 years.

With that, I urge my colleagues to vote to suspend the rules and pass H.R. 6063 by an overwhelming margin so that we can send it on to the President for his signature.

I reserve the balance of my time.

Mr. HALL of Texas. Mr. Speaker, I yield myself such time as I may consume.

I honor Chairman GORDON for pointing out that this year marks the 50th anniversary of the National Aeronautics and Space Administration. We refer to it as NASA. It is a good time to reflect on really how far our Nation

has come in a half century, but it is also an opportunity to reaffirm our commitment to space flight and innovation.

H.R. 6063 authorizes NASA for fiscal year 2009. It is the product of close bipartisan and bicameral consultation and cooperation, and I urge its support.

H.R. 6063 is a 1-year authorization. The intent of the bill is to keep NASA on its current path towards completing the International Space Station, transitioning between the Space Shuttle and the next crew vehicle, and maintaining a balanced set of science and aeronautics research programs. It also reaffirms Congress' long-standing commitment to NASA and to its programs.

But by being a 1-year bill, H.R. 6063 is designed to give the next President an opportunity to work with the next Congress in order to fashion a long-term strategy that is consistent with the administration's desires, as well as Congress.

H.R. 6063 contains a number of important provisions. It authorizes \$20.2 billion for NASA for FY 2009, including \$1 billion to accelerate development of the new *Constellation* crew vehicle launch system as a replacement for the space shuttle. This new launch system will provide our country with a modern, more robust and safer manned space flight capability that will enable our astronauts to fly out of low Earth orbit, an ability we haven't had since the retirements of *Apollo* over 30 years ago.

As we are debating the bill today, China has three men in orbit and the scheduled space walk took place earlier today. They are fast accelerating their space capabilities, and if we are to remain the leader in space exploration, we must continue to innovate and accelerate our programs.

As most of you are aware, there is currently a substantial gap, as much as 5 years, between retiring the shuttle and bringing the next crew launch system online. During this gap, our Nation will be in the untenable position of relying on Russia to assure a U.S. presence on the international space station. I find this unacceptable. Therefore, I am pleased that this bill authorizes extra funding for the new launch system, thereby taking a step toward closing the gap and reducing our dependence on foreign partners.

As this is only a 1-year bill, I look forward to working with the next administration to find further solutions to close the gap and preserve our own human space flight capabilities.

The bill also includes a number of provisions to encourage NASA, working with the private sector, to foster development of domestic commercial cargo launch capability primarily designed to take supplies to the Space Station. In addition, H.R. 6063 includes language directing NASA to solicit for commercial crew launch capability. Both of these provisions confirm our commitment to advancing American

space capabilities rather than relying on foreign nations.

In addition to human space flight, the bill also advances a balanced and robust space science, Earth science and aeronautics program. It embraces a number of recommendations that were put forth by witnesses from government, from industry, and I could name them, who testified at hearings before our committee over the previous 18 months.

These are sensible provisions designed to strengthen aeronautics, space science and Earth science research programs, encourage technology risk reduction policies and activities, foster efficient technology transfer from NASA to other Federal agencies and to the private sector, detect and mitigate the threat of near-Earth objects and research and monitor the effect of space weather on satellites.

The list is not exhaustive, but I want 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. 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.

□ 1415

It also continues to inspire Americans, and it draws the admiration of nations worldwide.

On the fiftieth anniversary of NASA, we should all be proud of what our Nation has accomplished in the last half century. We should boldly push forward with the excitement, support and anticipation for what the next 50 years hold. I am convinced that our greatest accomplishment lies in the frontiers ahead.

I want to thank Chairman GORDON and his staff. I want to thank my staff, Ed Feddeman and Ken Monroe. They worked closely with Dick Obermann.

I also want to acknowledge the work of Senator KAY BAILEY HUTCHISON and her capable staff. It's a good organization, and I appreciate all of them.

Mr. Speaker, I reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Speaker, I yield 5 minutes to my friend from Colorado (Mr. UDALL) the chairman of the subcommittee and thank him for his good work on this legislation.

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

Mr. UDALL of Colorado. Mr. Speaker, I support the passage of H.R. 6063, the NASA Reauthorization Act of 2008, as amended by the Senate. H.R. 6063 provides important direction and ensures the leadership of the United States civil space programs and provides the next president with congressional priorities for America's future in aeronautics and civil space activities.

I am very proud that this legislation has been a bipartisan effort every step

of the way. Our bill passed quickly through the committee process, and on June 18 of this year, H.R. 6063 passed the House by the overwhelming margin of 409-15.

Since that House passage, we have worked with our colleagues in the Senate to craft a final version that reflects the concerns and interests of Members in both Chambers of Congress. I am pleased that the Senate yesterday passed H.R. 6063, as amended, by unanimous consent.

I would like to thank Chairman GORDON, Ranking Member HALL and subcommittee Ranking Member FEENEY for their support and hard work on this bill.

I think a special acknowledgment is due Congressman LAMPSON, who represents the great City of Houston, and who has been tireless in his support of NASA.

I also wanted to point out, I think, the great model that Congressman HALL and Congressman GORDON present us here in our House, where they work together in a bipartisan fashion to make sure that NASA thrives, and is nurtured, and is in a position to excel in the years in front of us.

I also want to also take a minute and thank the excellent staff on both the majority and minority side for their outstanding work. On the Democratic side of the aisle, Dick Obermann, Pam Whitney, Allen Li, and Devin Bryant have all been instrumental in moving this bill forward, as has Wendy Adams on my personal staff.

I want to make special mention of Wendy. I know she is here on a Saturday, giving the extra effort that always characterizes her work on behalf of the committee and, in particular, the subcommittee.

I also wanted to take another bit of time and mention Dick Obermann and tell him how much I respect him and how much I have enjoyed working with him on all my years on the committee. He is, as everybody knows in this House, the epitome of professionalism. The House, the aerospace community, and I would say our country is fortunate to have his talents and intelligence and work ethic deployed on behalf of all of us. Dick, I will miss you and look forward to working with you wherever I am next year.

On the minority side, I want to thank Ed Feddeman, Kim Monroe and Lee Arnold for their efforts as well. We have truly worked together in a bipartisan fashion.

Now while the amended bill leaves out a set of House-passed provisions, I am confident that H.R. 6063, as amended, remains a good bill and puts NASA in the civil space program on a path that will help ensure our leadership in aerospace and aeronautics.

This year, as has been mentioned, we celebrate the 50th anniversary of the U.S. space program and the creation of the National Aeronautics and Space Administration. NASA has achieved remarkable accomplishments over the

past decades in science and aeronautics and human space flight. All of us here want to ensure that the next 50 years of our space program are equally bright.

This is a very good bill. I urge my colleagues to pass it, as amended, to ensure continued United States leadership in NASA's science, aeronautics and human space flight and exploration programs.

Mr. HALL of Texas. Mr. Speaker, I might add on to the gentleman's statement about Mr. Obermann. I think I am the one that employed him. When I switched to be a Republican, I was going to try to make a Republican out of him, but I don't think I would have been able to do that.

Mr. Speaker, I yield 5 minutes to the gentleman from California (Mr. ROHRBACHER).

Mr. ROHRBACHER. Mr. Speaker, I rise in strong support of the NASA Authorization Act, H.R. 6063. I would like to salute Chairman BART GORDON and Ranking Member RALPH HALL and Subcommittee Chairman UDALL and Ranking Member FEENEY.

They have done a terrific job this year. There has been no better example of bipartisan cooperation and a spirit of goodwill that I have ever found in this Congress than what I have found in these last 2 years on this committee. I salute all those who are involved, and I am very proud to be part of this team.

Space-based assets have become such a part of our way of life that quite often they are taken for granted. Just recently, when we experienced hurricanes and noted the damage that was done by these great natural catastrophes, sometimes people forget how much worse it would have been had we not been tracking these hurricanes as they headed towards populated areas.

We were able to save many thousands of lives and save many billions of dollars in damage because we have had space-based assets that permitted us to be able to make that contribution to our fellow human beings, saving their lives and property in the face of an oncoming storm by giving them adequate warning.

We also know that today our telephone calls are cheap, and they are clear. But this is dramatically different than what it was before we had space-based assets up there taking care of our communications.

The fact is that space-based assets have permitted people to take time and to communicate with their loved ones. We talk about our country when we talk about life, liberty, and the pursuit of happiness, talking to your grandfather, or letting your children talk to their grandparents on the phone.

When I was a kid, it cost maybe \$5 or \$6, and you could barely hear on the phone. You could barely hear. It was so expensive, you called once a month at the most. Now people can talk to their loved ones. Space-based assets have

done this, have increased our happiness, our level of happiness in this world.

Again, those communications satellites also have brought down the cost of entertainment, as we know. The fact is, the competition the space-based assets have given to the cable industry have brought down that cost.

GPS guides us to our locations, whether we are talking about jets or talking about automobiles, or even where farmers will plant their crops. Space-based assets are making such a difference in our lives.

Of course, space-based assets are making America much safer. When we meet adversaries overseas, our people have that advantage. It's keeping us free, it's keeping us safe.

Of course, when you talk about safety, I have been particularly interested in ensuring that we pay attention to the potential threat posed by near-Earth objects. NASA, of course, has tracked and catalogued over 90 percent of those objects in space that could destroy the human race, and we are very grateful for that job. But that leaves, of course, thousands of space objects that could cause horrendous damage and loss of life that still need to be tracked.

This bill authorizes \$2 million to keep the Arecibo telescope functioning. That Arecibo telescope in Puerto Rico is essential to this element of safety that we are providing by tracking near-Earth objects.

As I say, without the telescope, there may be, perhaps, something, if we learned early enough that we could deflect that might come here and kill millions of people. We are paying attention to this. This NASA authorization takes a step in the right direction there in keeping the Arecibo telescope alive.

We should be cooperating in space. All of these things cost money, and other countries have benefited by our research. We need to cooperate with Europe, Japan, Russia, and other countries to make sure that we can accomplish what we can do more by joining them than if we were alone in this.

However, that cooperation does not mean that we should not continue to be the leaders in space activity. We will no longer be the leading power on the Earth unless we are the leading power in space.

This is the 50th anniversary of NASA, and it is fitting that we set our sights on continuing to be the world's leading power in space. We can lead humankind into a better era. We have done that in the cause of human freedom. We will do that in the cause of technology and human development.

I stand here with pride and join my colleagues. I salute them for all the hard work they have done and in asking my colleagues to join me in authorizing NASA in this legislation.

Mr. GORDON of Tennessee. Let me first thank my friend from California for his great contribution to our com-

mittee. As a former chairman of this subcommittee, he is both knowledgeable and always very helpful.

I would like to now yield 3 minutes to a very enthusiastic supporter of NASA from Houston, Texas, the chairman of the Energy subcommittee, Mr. LAMPSON.

Mr. LAMPSON. Thank you, Chairman GORDON, for giving me the time and also for the good work that you have done, not just in this bill, but in guiding this committee, this Science Committee, for a long period of time and the great successes, also, to Chairman UDALL in working with you on this committee; Ranking Members HALL and FEENEY for the work that you all have done and staff, obviously, in putting together, not just a good bill here, but making it a pleasure to work on the Science Committee for the last 2 years.

Mr. Speaker, I rise in very strong support of this NASA Authorization Act. The \$20 billion authorization demonstrates Congress' real commitment to a NASA that can fully address exploration and scientific discovery.

I just read an article about the Chinese cheering as astronauts made their first space walk last night. It reminded me of what we have done over the last many decades, five decades, to be fairly precise, and how we seem to have lost some of the commitment, because we have seen the budget of NASA decline in the last many years from about 6 percent of our Nation's budget to about six-tenths of a percent of our Nation's budget.

When you recognize that NASA inspires children to study math, science, and engineering and see that we have slipped in relation to other places in the world, some say because of that, maybe we really need another crisis. We need another Sputnik to inspire us to recommit ourselves to what we can learn in space and what we can do in exploration and science in space.

Well, I maintain that we have those beeps that some of us heard from Sputnik in 1957, that every time something occurs like China's having its own space walker now, or another nation launching some special craft or accomplishing some other task, each one of those events is, indeed, a beep of that Sputnik that we heard in 1957. We need to make NASA a priority again in this country, because it has such an impact on our standing in the world, our knowledge and inspiration for children and certainly our own standard of living.

I would mention two other programs that are included in this bill. One is called the Space Technical Alliance Outreach Program authorized in this bill. It helps small businesses grow, it creates jobs, contributes to our economy, as do many other things in the bill; as well as a little bitty program like allowing children in their own schools here on Earth to be able to take pictures from space that ultimately inspire them to want to study,

and do study, more on those areas of math and science and engineering.

I encourage each of my colleagues to vote positively on this bill and send a strong signal that we are committed to space and exploration.

Mr. HALL of Texas. Mr. Speaker, I continue to reserve the balance of my time.

Mr. GORDON of Tennessee. Mr. Speaker, I yield 2 minutes to my friend from Ohio (Mr. KUCINICH).

Mr. KUCINICH. I thank the gentleman.

Mr. Speaker, I rise in strong support of H.R. 6063, the NASA Authorization Act of 2008.

I want to thank the committee chairman, BART GORDON, and the subcommittee chairman, MARK UDALL, for putting together this effective package and my friends on the other side of the aisle for their support of it as well.

□ 1430

This bill authorizes funds and specifies policy guidance that will keep NASA's centers, which are the heart of the agency, healthy and financially strong.

H.R. 6063 provides \$1 billion to accelerate the completion of the next generation of manned vehicles that will replace the Space Shuttle. I am proud to say the world class facility at the NASA Glenn Research Center in my district will play a lead role in maintaining key aspects of tomorrow's space program.

NASA Glenn also specializes in aeronautics basic research. This bill continues the record of excellence by providing \$853 million for aeronautics, a 35 percent increase over fiscal year 2008.

But the reason for NASA's historical and continued successes are its workers. They have brought NASA unparalleled repute around the world, turning it into an icon of intelligence and innovation. That is why this bill's most important provisions are those that protect workers.

I want to thank the chairman of the Federal Workforce Subcommittee, DANNY DAVIS, for working with me on two critical workforce provisions that are included in this bill. The most important provision is an extension of a ban on layoffs until at least 2011. Since announcing the ambitious vision for space exploration, the administration has, unfortunately, underfunded NASA. But with equal consistency in a bipartisan way, Congress has rejected these cuts and layoffs.

Layoffs undermine not only workers' lives and mission of the agency, but also the regional economy. According to 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.

This bill will also 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 buyout. The provision would be helpful in fostering a respectful workforce transition plan during this time at NASA.

Again, this is a bipartisan bill. I want to thank the Ohio delegation for supporting our establishment as well as this Congress for the work that they have done on this.

Mr. HALL of Texas. Mr. Speaker, I yield back the balance of my time.

Mr. GORDON of Tennessee. Mr. Speaker, I will quickly conclude by saying that just because we have all talked nice here today and been civil and we have a bipartisan bill, doesn't mean that this was not a difficult bill to put together. A lot of work went into this, a lot of respectful collaboration on a bipartisan way. We have a good bill. I thank my friends for helping.

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

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Tennessee (Mr. GORDON) that the House suspend the rules and concur in the Senate amendment to the bill, H.R. 6063.

The question was taken; and (two-thirds being in the affirmative) the rules were suspended and the Senate amendment was concurred in.

A motion to reconsider was laid on the table.

HONORING AND SUPPORTING THE HADLEY SCHOOL FOR THE BLIND

Mr. ALTMIRE. Mr. Speaker, I ask unanimous consent that the Committee on Education and Labor be discharged from further consideration of H. Res. 875 and ask for its immediate consideration in the House.

The Clerk read the title of the resolution.

The SPEAKER pro tempore (Mr. LAMPSON). Is there objection to the request of the gentleman from Pennsylvania?

There was no objection.

The text of the resolution is as follows:

H. RES. 875

Whereas Mr. William A. Hadley, a high school teacher who lost his vision at the age of 55, and ophthalmologist Dr. E.V.L. Brown first welcomed students to the Hadley School for the Blind in 1920;

Whereas the Hadley School for the Blind's mission is to promote independent living through lifelong, distance education programs for blind people, their families and blindness service providers;

Whereas over the past 87 years, the Hadley School has grown to have an annual enrollment of more than 10,000 students from all 50 states and 100 countries;

Whereas the Hadley School for the Blind has a high school degree program, an adult continuing study program, and in 2008 will be launching the Hadley School for Professional Studies;

Whereas the Hadley School for the Blind offers a wide range of distance education courses for blind or visually impaired individuals who are at least 14 years of age, relatives of blind or visually impaired children,

family members of blind or visually impaired adults, and professionals in the blindness field;

Whereas there are more than 90 courses offered in Braille, large print, audiocassette, and online and students study in their own homes, at their own pace, completely free of charge; and

Whereas student Christine Gilson is bridging cultural boundaries by teaching visually impaired Chinese students English online: Now, therefore, be it

Resolved, That the House of Representatives—

(1) honors the important and positive impact the Hadley School for the Blind has had on the lives of thousands of visually impaired people across the globe; and

(2) supports their mission to promote independent living through lifelong, distance education programs for blind people, their families and blindness service providers.

The resolution was agreed to.

AMENDMENT TO THE PREAMBLE OFFERED BY MR. ALTMIRE

Mr. ALTMIRE. I have an amendment to the preamble at the desk.

The Clerk read as follows:

Amendment to the preamble offered by Mr. ALTMIRE:

Strike the preamble and insert the following:

Whereas Mr. William A. Hadley, a high school teacher who lost his vision at the age of 55, and ophthalmologist Dr. E.V.L. Brown first welcomed students to the Hadley School for the Blind in 1920;

Whereas the Hadley School for the Blind's mission is to promote independent living through lifelong, distance education programs for blind people, their families and blindness service providers;

Whereas over the past 87 years, the Hadley School has grown to have an annual enrollment of more than 10,000 students from all 50 states and 100 countries;

Whereas the Hadley School for the Blind has a high school degree program, an adult continuing study program, and in 2008 will be launching the Hadley School for Professional Studies;

Whereas the Hadley School for the Blind offers a wide range of distance education courses for blind or visually impaired individuals who are at least 14 years of age, relatives of blind or visually impaired children, family members of blind or visually impaired adults, and professionals in the blindness field;

Whereas there are more than 90 courses offered in Braille, large print, audiocassette, and online and students study in their own homes, at their own pace, completely free of charge; and

Whereas student Christie Gilson is bridging cultural boundaries by teaching visually impaired Chinese students English online: Now, therefore, be it

Mr. ALTMIRE (during the reading). Mr. Speaker, I ask unanimous consent that the reading of the amendment be dispensed with.

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

There was no objection.

The amendment to the preamble was agreed to.

A motion to reconsider was laid on the table.

NATIONAL WORK AND FAMILY MONTH

Mr. ALTMIRE. Mr. Speaker, I ask unanimous consent that the Committee on Education and Labor be discharged from further consideration of the resolution (H. Res. 1440) expressing support for designation of the month of October as "National Work and Family Month," and ask for its immediate consideration in the House.

The Clerk read the title of the resolution.

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

There was no objection.

The text of the resolution is as follows:

H. RES. 1440

Whereas according to the report by WorldatWork titled "Attraction and Retention", the quality of workers' jobs and the supportiveness of their workplaces are key predictors of job productivity, job satisfaction, commitment to employers, and retention;

Whereas employees who have more access to flexible work arrangements enabling employees to balance family and work are significantly more satisfied with their jobs, and experience less interference between their jobs and family lives than those employees who have less access to flexible work arrangements, according to the Families and Work Institute 2002 National Study of the Changing Workforce;

Whereas according to the 2004 report "Overwork in America", employees who are able to effectively balance family and work responsibilities are less likely to report making mistakes, or feel resentment toward employers and coworkers;

Whereas employees who are able to effectively balance family and work responsibilities tend to feel more successful in their relationships with their spouses, children, and friends, and tend to feel healthier;

Whereas 85 percent of United States wage and salaried workers have immediate, day-to-day family responsibilities outside of their jobs;

Whereas research by the Radcliffe Public Policy Center in 2000 revealed that men in their 20s and 30s, and women in their 20s, 30s, and 40s, identified the most important job characteristic as being a work schedule that allows them to spend time with their families;

Whereas according to the 2006 American Community Survey, 47 percent of wage and salaried workers are parents with children under the age of 18 who live with them at least half-time;

Whereas job flexibility often allows parents to be more involved in their children's lives, and research reveals that parental involvement is associated with children's higher achievement in language and mathematics, improved behavior, greater academic persistence, and lower dropout rates;

Whereas the 2000 Urban Working Families study revealed that a lack of job flexibility for working parents negatively affects children's health in ways that range from children being unable to make needed doctors' appointments, to children receiving inadequate early care, leading to more severe and prolonged illness;

Whereas according to a Centers for Disease Control and Prevention (CDC) report, breastfeeding is the most beneficial form of