Editorial Notes

REFERENCES IN TEXT

The date of enactment of the PROSWIFT Act, referred to in subsecs. (a), (b), and (c)(2), is the date of enactment of Pub. L. 116–181, which was approved Oct. 21, 2020.

§ 60608. Space weather benchmarks

The interagency working group established under section 60601(c) shall periodically review and update the benchmarks described in the report of the National Science and Technology Council entitled ''Space Weather Phase 1 Benchmarks'' and dated June 2018, as necessary, based on—

(1) any significant new data or advances in scientific understanding that become available; or

(2) the evolving needs of entities impacted by space weather phenomena.

(Pub. L. 116–181, § 2(b), Oct. 21, 2020, 134 Stat. 892.)

Subtitle VII—Access to Space

CHAPTER 701—USE OF SPACE LAUNCH SYSTEM OR ALTERNATIVES

Editorial Notes

AMENDMENTS

2015—Pub. L. 114–90, title I, § 117(a)(1), (b)(2), Nov. 25, 2015, 129 Stat. 717, 718, added item 70104, substituted ''SPACE LAUNCH SYSTEM'' for ''SPACE SHUTTLE'' in chapter heading, ''space launch system'' for ''space shuttle'' in items 70101 and 70103, and ''Space launch system'' for ''Space shuttle'' in item 70102.

§ 70101. Recovery of fair value of placing Department of Defense payloads in orbit with space launch system

Notwithstanding any other provision of law, or any interagency agreement, the Administrator shall charge such prices as are necessary to recover the fair value of placing Department of Defense payloads into orbit by means of the space launch system.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3427; Pub. L. 114–90, title I, § 117(a)(2), Nov. 25, 2015, 129 Stat. 717.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70101	42 U.S.C. 2464.	Pub. L. 97–324, title I, § 106(a), Oct. 15, 1982, 96 Stat. 1600.

Editorial Notes

AMENDMENTS

2015—Pub. L. 114–90 substituted ''space launch system'' for ''space shuttle'' in section catchline and text.

§ 70102. Space launch system use policy

(a) IN GENERAL.—The Space Launch System may be used for the following circumstances:

(1) Payloads and missions that contribute to extending human presence beyond low-Earth orbit and substantially benefit from the unique capabilities of the Space Launch System.

(2) Other payloads and missions that substantially benefit from the unique capabilities of the Space Launch System.

(3) On a space available basis, Federal Government or educational payloads that are consistent with NASA's mission for exploration beyond low-Earth orbit.

(4) Compelling circumstances, as determined by the Administrator.

(b) AGREEMENTS WITH FOREIGN ENTITIES.—The Administrator may plan, negotiate, or implement agreements with foreign entities for the launch of payloads for international collaborative efforts relating to science and technology using the Space Launch System.

(c) COMPELLING CIRCUMSTANCES.—Not later than 30 days after the date the Administrator makes a determination under subsection (a)(4), the Administrator shall transmit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science of the House of Representatives written notification of the Administrator's intent to select the Space Launch System for a specific mission under that subsection, including justification for the determination.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3427; Pub. L. 114–90, title I, § 117(a)(3), Nov. 25, 2015, 129 Stat. 717.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70102(a)	42 U.S.C. 2465a(a).	Pub. L. 101–611, title I, § 112(a), (c), (d), Nov. 16, 1990, 104 Stat. 3198, 3199.
70102(b)	42 U.S.C. 2465a(c).	
70102(c)	42 U.S.C. 2465a(d).	

Editorial Notes

AMENDMENTS

2015—Pub. L. 114–90 amended section generally. Prior to amendment, section related to space shuttle use policy.

Statutory Notes and Related Subsidiaries

FLIGHT OPPORTUNITIES

Pub. L. 115–10, title VIII, § 826, Mar. 21, 2017, 131 Stat. 65, provided that:

''(a) DEVELOPMENT OF PAYLOADS.—

''(1) IN GENERAL.—In order to conduct necessary research, the Administrator [of the National Aeronautics and Space Administration] shall continue and, as the Administrator considers appropriate, expand the development of technology payloads for—

''(A) scientific research; and

''(B) investigating new or improved capabilities.

''(2) FUNDS.—For the purpose of carrying out paragraph (1), the Administrator shall make funds available for—

''(A) flight testing;

''(B) payload development; and

''(C) hardware related to subparagraphs (A) and (B).

''(b) REAFFIRMATION OF POLICY.—Congress reaffirms that the Administrator should provide flight opportunities for payloads to microgravity environments and suborbital altitudes as authorized by section 907 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18405).''

SECONDARY PAYLOAD CAPABILITY

Pub. L. 109–155, title VI, § 602, Dec. 30, 2005, 119 Stat. 2931, provided that:

''(a) IN GENERAL.—In order to provide more routine and affordable access to space for a broad range of scientific payloads, the Administrator is encouraged to provide the capabilities to support secondary payload flight opportunities on United States launch vehicles, or free flyers, for satellites or scientific payloads weighing less than 500 kilograms.

''(b) FEASIBILITY STUDY.—The Administrator shall initiate a feasibility study for designating a National Free Flyer Launch Coordination Center as a means of coordinating, consolidating, and integrating secondary launch capabilities, launch opportunities, and payloads.

''(c) ASSESSMENT.—The feasibility study required by subsection (b) shall include an assessment of the feasibility of integrating a National Free Flyer Launch Coordination Center within the operations and facilities of an existing nonprofit organization such as the Inland Northwest Space Alliance in Missoula, Montana, or a similar entity, and shall include an assessment of the potential utilization of existing launch and launch support facilities and capabilities, including but not limited to those in the States of Montana and New Mexico and their respective contiguous States, and the State of Alaska, for the integration and launch of secondary payloads, including an assessment of the feasibility of establishing cooperative agreements among such facilities, existing or future commercial launch providers, payload developers, and the designated Coordination Center.''

§ 70103. Commercial payloads on space launch system

(a) DEFINITIONS.—In this section:

(1) LAUNCH VEHICLE.—The term ''launch vehicle'' means any vehicle constructed for the purpose of operating in, or placing a payload in, outer space.

(2) PAYLOAD.—The term ''payload'' means an object which a person undertakes to place in outer space by means of a launch vehicle, and includes subcomponents of the launch vehicle specifically designed or adapted for that object.

(b) IN GENERAL.—Commercial payloads may not be accepted for launch as primary payloads on the space launch system unless the Administrator determines that—

(1) the payload requires the unique capabilities of the space launch system; or

(2) launching of the payload on the space launch system is important for either national security or foreign policy purposes.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3428; Pub. L. 114–90, title I, § 117(a)(4), Nov. 25, 2015, 129 Stat. 718.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70103(a)	42 U.S.C. 2465c.	Pub. L. 101–611, title II, § 203, Nov. 16, 1990, 104 Stat. 3206; Pub. L. 105–303, title II, § 203(2), Oct. 28, 1998, 112 Stat. 2855.

HISTORICAL AND REVISION NOTES—CONTINUED

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70103(b)	42 U.S.C. 2465f.	Pub. L. 101–611, title II, § 206, Nov. 16, 1990, 104 Stat. 3207; Pub. L. 105–303, title II, § 203(4), Oct. 28, 1998, 112 Stat. 2855.

In subsection (a), the words ''this section'' are substituted for ''this title'', meaning title II of Public Law 101–611, because title II of Public Law 101–611 was previously repealed except for section 201 (a short title provision, classified to 42 U.S.C. 2451 note, in which neither defined term appears) and sections 203 (42 U.S.C. 2465c) and 206 (42 U.S.C. 2465f) of Public Law 101–611, which are restated in this section.

Editorial Notes

AMENDMENTS

2015—Pub. L. 114–90 substituted ''space launch system'' for ''space shuttle'' in section catchline and wherever appearing in text.

§ 70104. Definition of Space Launch System

In this chapter, the term ''Space Launch System'' means the Space Launch System authorized under section 302 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18322).

(Added Pub. L. 114–90, title I, § 117(a)(5), Nov. 25, 2015, 129 Stat. 718.)

[CHAPTER 703—REPEALED]

[§§ 70301 to 70304. Repealed. Pub. L. 115–10, title IV, § 416(b), Mar. 21, 2017, 131 Stat. 35]

Section 70301, Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3428, set out Congressional findings.

Section 70302, Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3429, related to purpose, policy, and goals of chapter.

Section 70303, Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3429, defined ''additive cost''.

Section 70304, Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3429, related to duties of Administrator.

CHAPTER 705—EXPLORATION INITIATIVES

§ 70501. Space shuttle follow-on

(a) POLICY STATEMENT.—In order to ensure continuous United States participation and leadership in the exploration and utilization of space and as an essential instrument of national security, it is the policy of the United States to maintain an uninterrupted capability for human space flight and operations—

(1) in low-Earth orbit; and

(2) beyond low-Earth orbit once the capabilities described in section 421(f) of the National Aeronautics and Space Administration Transition Authorization Act of 2017 become available.

(b) ANNUAL REPORT.—The Administrator shall transmit an annual report to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives describing the progress being made toward developing the Space Launch System and Orion and the estimated time before they will demonstrate crewed, orbital spaceflight.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3430; Pub. L. 115–10, title IV, § 417, Mar. 21, 2017, 131 Stat. 35.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70501(a)	42 U.S.C. 16761(a).	Pub. L. 109–155, title V, § 501(a), (b), Dec. 30, 2005, 119 Stat. 2927.
70501(b)	42 U.S.C. 16761(b).	

In subsection (b), the words ''The Administrator shall transmit an annual report'' are substituted for ''Not later than 180 days after the date of enactment of this Act [December 30, 2005] and annually thereafter, the Administrator shall transmit a report'' to eliminate obsolete language.

In subsection (b), the words ''Committee on Science and Technology'' are substituted for ''Committee on Science'' on authority of Rule X(1)(*o*) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

Editorial Notes

REFERENCES IN TEXT

Section 421(f) of the National Aeronautics and Space Administration Transition Authorization Act of 2017, referred to in subsec. (a)(2), is section 421(f) of Pub. L. 115–10, which is set out as a note under section 20301 of this title.

AMENDMENTS

2017—Subsec. (a). Pub. L. 115–10, § 417(1), amended subsec. (a) generally. Prior to amendment, text read as follows: ''It is the policy of the United States to possess the capability for human access to space on a continuous basis.''

Subsec. (b). Pub. L. 115–10, § 417(2), substituted ''Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives describing the progress being made toward developing the Space Launch System and Orion'' for ''Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the progress being made toward developing the Crew Exploration Vehicle and the Crew Launch Vehicle''.

Statutory Notes and Related Subsidiaries

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

TRANSITION

Pub. L. 110–422, title VI, § 613, Oct. 15, 2008, 122 Stat. 4799, provided that:

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

''(1) IN GENERAL.—Not later than 90 days after the date of enactment of this Act [Oct. 15, 2008], the Administrator [of NASA] 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 [National Aeronautics and Space Administration] 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 [Oct. 15, 2008], NASA shall provide a copy of the plan required by paragraph (1) to the Congress.''

Pub. L. 110–161, div. B, title III, Dec. 26, 2007, 121 Stat. 1919, provided that: ''The Administrator of the National Aeronautics and Space Administration shall prepare a strategy for minimizing job losses when the National Aeronautics and Space Administration transitions from the Space Shuttle to a successor human-rated space transport vehicle. This strategy shall include: (1) specific initiatives that the National Aeronautics and Space Administration has undertaken, or plans to undertake, to maximize the utilization of existing civil service and contractor workforces at each of the affected Centers; (2) efforts to equitably distribute tasks and workload between the Centers to mitigate the brunt of job losses being borne by only certain Centers; (3) new workload, tasks, initiatives, and missions being secured for the affected Centers; and (4) overall projections of future civil service and contractor workforce levels at the affected Centers. The Administrator shall transmit this strategy to Congress not later than 90 days after the date of enactment of this Act [Dec. 26, 2007]. The Administrator shall update and transmit to Congress this strategy not less than every six months thereafter until the successor human-rated space transport vehicle is fully operational.''

Pub. L. 109–155, title V, § 502, Dec. 30, 2005, 119 Stat. 2928, provided that:

''(a) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall, to the fullest extent possible consistent with a successful development program, use the personnel, capabilities, assets, and infrastructure of the Space Shuttle program in developing the Crew Exploration Vehicle, Crew Launch Vehicle, and a heavy-lift launch vehicle.

''(b) PLAN.—Not later than 180 days after the date of enactment of this Act [Dec. 30, 2005], the Administrator shall transmit to the Committee on Science [now Committee on Science, Space, and Technology] of the

House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan describing how NASA [National Aeronautics and Space Administration] will proceed with its human space flight programs, which, at a minimum, shall describe—

''(1) how NASA will deploy personnel from, and use the facilities of, the Space Shuttle program to ensure that the Space Shuttle operates as safely as possible through its final flight and to ensure that personnel and facilities from the Space Shuttle program are used in NASA's exploration programs in accordance with subsection (a);

''(2) the planned number of flights the Space Shuttle will make before its retirement;

''(3) the means, other than the Space Shuttle and the Crew Exploration Vehicle, including commercial vehicles, that may be used to ferry crew and cargo to and from the ISS [International Space Station];

''(4) the intended purpose of lunar missions and the architecture for those missions; and

''(5) the extent to which the Crew Exploration Vehicle will allow for the escape of the crew in an emergency.

''(c) PERSONNEL.—The Administrator shall consult with other appropriate Federal agencies and with NASA contractors and employees to develop a transition plan for any Federal and contractor personnel engaged in the Space Shuttle program who can no longer be retained because of the retirement of the Space Shuttle. The plan shall include actions to assist Federal and contractor personnel in taking advantage of training, retraining, job placement and relocation programs, and any other actions that NASA will take to assist the employees. The plan shall also describe how the Administrator will ensure that NASA and its contractors will have an appropriate complement of employees to allow for the safest possible use of the Space Shuttle through its final flight. The Administrator shall transmit the plan to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than March 31, 2006.''

§ 70502. Exploration plan and programs

The Administrator shall—

(1) construct an architecture and implementation plan for the Administration's human exploration program that is not critically dependent on the achievement of milestones by fixed dates;

(2) implement an exploration research and technology development program to enable human and robotic operations consistent with section 20302(b) of this title;

(3) conduct an in-situ resource utilization technology program to develop the capability to use space resources to increase independence from Earth, and sustain exploration beyond low-Earth orbit; and

(4) pursue aggressively automated rendezvous and docking capabilities that can support the International Space Station and other mission requirements.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3430; Pub. L. 115–10, title IV, § 415, Mar. 21, 2017, 131 Stat. 34.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70502	42 U.S.C. 16763.	Pub. L. 109–155, title V, § 503, Dec. 30, 2005, 119 Stat. 2929.

Editorial Notes

AMENDMENTS

2017—Par. (2). Pub. L. 115–10 amended par. (2) generally. Prior to amendment, par. (2) read as follows: ''implement an exploration technology development program to enable lunar human and robotic operations consistent with section 20302(b) of this title, including surface power to use on the Moon and other locations;''.

§ 70503. Ground-based analog capabilities

(a) IN GENERAL.—The Administrator may establish a ground-based analog capability in remote United States locations in order to assist in the development of lunar operations, life support, and in-situ resource utilization experience and capabilities.

(b) ENVIRONMENTAL CHARACTERISTICS.—The Administrator shall select locations for the activities described in subsection (a) that—

(1) are regularly accessible;

(2) have significant temperature extremes and range; and

(3) have access to energy and natural resources (including geothermal, permafrost, volcanic, or other potential resources).

(c) INVOLVEMENT OF LOCAL POPULATIONS AND PRIVATE SECTOR PARTNERS.—In carrying out this section, the Administrator shall involve local populations, academia, and industrial partners as much as possible to ensure that ground-based benefits and applications are encouraged and developed.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3430.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70503	42 U.S.C. 16764.	Pub. L. 109–155, title V, § 504, Dec. 30, 2005, 119 Stat. 2929.

§ 70504. Stepping stone approach to exploration

(a) IN GENERAL.—The Administration—

(1) may conduct missions to intermediate destinations in sustainable steps in accordance with section 20302(b) of this title, and on a timetable determined by the availability of funding, in order to achieve the objective of human exploration of Mars specified in section 202(b)(5) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18312(b)(5)); and

(2) shall incorporate any such missions into the human exploration roadmap under section 432 of the National Aeronautics and Space Administration Transition Authorization Act of 2017.

(b) COST-EFFECTIVENESS.—In order to maximize the cost-effectiveness of the long-term space exploration and utilization activities of the United States, the Administrator shall take all necessary steps, including engaging international, academic, and industry partners, to ensure that activities in the Administration's human space exploration program balance how those activities might also help meet the requirements of future exploration and utilization activities leading to human habitation on the surface of Mars.

(c) COMPLETION.—Within budgetary considerations, 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.

(d) INTERNATIONAL PARTICIPATION.—In order to achieve the goal of successfully conducting a crewed mission to the surface of Mars, the President may invite the United States partners in the ISS program and other nations, as appropriate, to participate in an international initiative under the leadership of the United States.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3431; Pub. L. 115–10, title IV, § 414, Mar. 21, 2017, 131 Stat. 34.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70504	42 U.S.C. 17731.	Pub. L. 110–422, title IV, § 403, Oct. 15, 2008, 122 Stat. 4789.

Editorial Notes

REFERENCES IN TEXT

Section 432 of the National Aeronautics and Space Administration Transition Authorization Act of 2017, referred to in subsec. (a)(2), is section 432 of Pub. L. 115–10, which is set out in a note under section 20302 of this title.

AMENDMENTS

2017—Pub. L. 115–10 amended section generally. Prior to amendment, text read as follows: ''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.''

§ 70505. Lunar outpost

(a) ESTABLISHMENT.—As the Administration works toward the establishment of a lunar outpost, the Administration 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''.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3431.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70505(a)	42 U.S.C. 17732(a).	Pub. L. 110–422, title IV, § 404(a), (b), Oct. 15, 2008, 122 Stat. 4789.
70505(b)	42 U.S.C. 17732(b).	

§ 70506. Exploration technology research

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.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3431.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70506	42 U.S.C. 17733(b).	Pub. L. 110–422, title IV, § 405(b), Oct. 15, 2008, 122 Stat. 4789.

Statutory Notes and Related Subsidiaries

PURPOSE

Pub. L. 110–422, title IV, § 405(a), Oct. 15, 2008, 122 Stat. 4789, provided that: ''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.''

INNOVATIVE TECHNOLOGIES FOR HUMAN SPACE FLIGHT

Pub. L. 106–391, title III, § 313, Oct. 30, 2000, 114 Stat. 1594, provided that:

''(a) ESTABLISHMENT OF PROGRAM.—In order to promote a 'faster, cheaper, better' approach to the human exploration and development of space, the Administrator [of the National Aeronautics and Space Administration] shall establish a Human Space Flight Innovative Technologies program of ground-based and space-based research and development in innovative technologies. The program shall be part of the Technology and Commercialization program.

''(b) AWARDS.—At least 75 percent of the amount appropriated for Technology and Commercialization under section 101(b)(4) [114 Stat. 1581] for any fiscal year shall be awarded through broadly distributed announcements of opportunity that solicit proposals from educational institutions, industry, nonprofit institutions, National Aeronautics and Space Administration Centers, the Jet Propulsion Laboratory, other Federal agencies, and other interested organizations, and that allow partnerships among any combination of those entities, with evaluation, prioritization, and recommendations made by external peer review panels.

''(c) PLAN.—The Administrator shall provide to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and to the Committee on Commerce, Science, and Transportation of the Senate, not later than December 1, 2000, a plan to implement the program established under subsection (a).''

§ 70507. 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 develop-

ment of new technology. The program shall be independent of the flight projects under development. The Administration 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.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3431.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70507	42 U.S.C. 17741.	Pub. L. 110–422, title V, § 501, Oct. 15, 2008, 122 Stat. 4791.

§ 70508. Robotic or human servicing of 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.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3432.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70508	42 U.S.C. 17742.	Pub. L. 110–422, title V, § 502, Oct. 15, 2008, 122 Stat. 4791.

CHAPTER 707—HUMAN SPACE FLIGHT INDEPENDENT INVESTIGATION COMMISSION

§ 70701. Definitions

In this chapter:

(1) COMMISSION.—The term ''Commission'' means a Commission established under this chapter.

(2) INCIDENT.—The term ''incident'' means either an accident or a deliberate act.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3432.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70701	42 U.S.C. 16841.	Pub. L. 109–155, title VIII, § 821, Dec. 30, 2005, 119 Stat. 2941.

§ 70702. Establishment of Commission

(a) ESTABLISHMENT.—The President shall establish an independent, nonpartisan Commission within the executive branch to investigate any incident that results in the loss of—

(1) a space shuttle;

(2) the International Space Station or its operational viability;

(3) any other orbital or suborbital space vehicle carrying humans that is—

(A) owned by the Federal Government; or

(B) being used pursuant to a contract or Space Act Agreement with the Federal Government for carrying a government astronaut or a researcher funded by the Federal Government; or

(4) a crew member or passenger of any space vehicle described in this subsection.

(b) DEADLINE FOR ESTABLISHMENT.—The President shall establish a Commission within 7 days after an incident specified in subsection (a).

(c) DEFINITIONS.—In this section:

(1) GOVERNMENT ASTRONAUT.—The term ''government astronaut'' has the meaning given the term in section 50902.

(2) SPACE ACT AGREEMENT.—The term ''Space Act Agreement'' means an agreement entered into by the Administration pursuant to its other transactions authority under section 20113(e).

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3432; Pub. L. 115–10, title VIII, § 838, Mar. 21, 2017, 131 Stat. 71.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70702	42 U.S.C. 16842.	Pub. L. 109–155, title VIII, § 822, Dec. 30, 2005, 119 Stat. 2941.

Editorial Notes

AMENDMENTS

2017—Subsec. (a)(3). Pub. L. 115–10, § 838(1), amended par. (3) generally. Prior to amendment, par. (3) read as follows: ''any other United States space vehicle carrying humans that is owned by the Federal Government or that is being used pursuant to a contract with the Federal Government; or''.

Subsec. (c). Pub. L. 115–10, § 838(2), added subsec. (c).

§ 70703. Tasks of Commission

A Commission established pursuant to this chapter shall, to the extent possible, undertake the following tasks:

(1) INVESTIGATION.—Investigate the incident.

(2) CAUSE.—Determine the cause of the incident.

(3) CONTRIBUTING FACTORS.—Identify all contributing factors to the cause of the incident.

(4) RECOMMENDATIONS.—Make recommendations for corrective actions.

(5) ADDITIONAL FINDINGS OR RECOMMENDATIONS.—Provide any additional findings or recommendations deemed by the Commission to be important, whether or not they are related to the specific incident under investigation.

(6) REPORT.—Prepare a report to Congress, the President, and the public.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3432.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70703	42 U.S.C. 16843.	Pub. L. 109–155, title VIII, § 823, Dec. 30, 2005, 119 Stat. 2941.

§ 70704. Composition of Commission

(a) NUMBER OF COMMISSIONERS.—A Commission established pursuant to this chapter shall consist of 15 members.

(b) SELECTION.—The members of a Commission shall be chosen in the following manner:

(1) APPOINTMENT BY PRESIDENT.—The President shall appoint the members, and shall designate the Chairman and Vice Chairman of the Commission from among its members.

(2) LISTS PROVIDED BY LEADERS OF CONGRESS.—The majority leader of the Senate, the minority leader of the Senate, the Speaker of the House of Representatives, and the minority leader of the House of Representatives shall each provide to the President a list of candidates for membership on the Commission. The President may select one of the candidates from each of the 4 lists for membership on the Commission.

(3) PROHIBITION REGARDING FEDERAL OFFICERS AND EMPLOYEES AND MEMBERS OF CONGRESS.—No officer or employee of the Federal Government or Member of Congress shall serve as a member of the Commission.

(4) PROHIBITION REGARDING CONTRACTORS.—No member of the Commission shall have, or have pending, a contractual relationship with the Administration.

(5) PROHIBITION REGARDING CONFLICT OF INTEREST.—The President shall not appoint any individual as a member of a Commission under this section who has a current or former relationship with the Administrator that the President determines would constitute a conflict of interest.

(6) EXPERIENCE.—To the extent practicable, the President shall ensure that the members of the Commission include some individuals with experience relative to human carrying spacecraft, as well as some individuals with investigative experience and some individuals with legal experience.

(7) DIVERSITY.—To the extent practicable, the President shall seek diversity in the membership of the Commission.

(c) DEADLINE FOR APPOINTMENT.—All members of a Commission established under this chapter shall be appointed no later than 30 days after the incident.

(d) INITIAL MEETING.—A Commission shall meet and begin operations as soon as practicable.

(e) SUBSEQUENT MEETINGS.—After its initial meeting, a Commission shall meet upon the call of the Chairman or a majority of its members.

(f) QUORUM.—Eight members of a Commission shall constitute a quorum.

(g) VACANCIES.—Any vacancy in a Commission shall not affect its powers, but shall be filled in the same manner in which the original appointment was made.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3433.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70704(a)	42 U.S.C. 16844(a).	Pub. L. 109–155, title VIII, § 824, Dec. 30, 2005, 119 Stat. 2942.

HISTORICAL AND REVISION NOTES—CONTINUED

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70704(b)	42 U.S.C. 16844(b).	
70704(c)	42 U.S.C. 16844(c).	
70704(d)	42 U.S.C. 16844(d).	
70704(e)	42 U.S.C. 16844(e) (1st sentence).	
70704(f)	42 U.S.C. 16844(e) (2d sentence).	
70704(g)	42 U.S.C. 16844(e) (last sentence).	

§ 70705. Powers of Commission

(a) HEARINGS AND EVIDENCE.—A Commission or, on the authority of the Commission, any subcommittee or member thereof, may, for the purpose of carrying out this chapter—

(1) hold such hearings and sit and act at such times and places, take such testimony, receive such evidence, administer such oaths; and

(2) require, by subpoena or otherwise, the attendance and testimony of such witnesses and the production of such books, records, correspondence, memoranda, papers, and documents,

as the Commission or such designated subcommittee or member may determine advisable.

(b) CONTRACTING.—A Commission may, to such extent and in such amounts as are provided in appropriation Acts, enter into contracts to enable the Commission to discharge its duties under this chapter.

(c) INFORMATION FROM FEDERAL AGENCIES.—

(1) IN GENERAL.—A Commission may secure directly from any executive department, bureau, agency, board, commission, office, independent establishment, or instrumentality of the Government, information, suggestions, estimates, and statistics for the purposes of this chapter. Each department, bureau, agency, board, commission, office, independent establishment, or instrumentality shall, to the extent authorized by law, furnish such information, suggestions, estimates, and statistics directly to the Commission, upon request made by the Chairman, the chairman of any subcommittee created by a majority of the Commission, or any member designated by a majority of the Commission.

(2) RECEIPT, HANDLING, STORAGE, AND DISSEMINATION.—Information shall only be received, handled, stored, and disseminated by members of the Commission and its staff consistent with all applicable statutes, regulations, and Executive orders.

(d) ASSISTANCE FROM FEDERAL AGENCIES.—

(1) GENERAL SERVICES ADMINISTRATION.—The Administrator of General Services shall provide to a Commission on a reimbursable basis administrative support and other services for the performance of the Commission's tasks.

(2) OTHER DEPARTMENTS AND AGENCIES.—In addition to the assistance prescribed in paragraph (1), departments and agencies of the United States may provide to the Commission such services, funds, facilities, staff, and other support services as they may determine advisable and as may be authorized by law.

(3) ADMINISTRATION ENGINEERING AND SAFETY CENTER.—The Administration Engineering and Safety Center shall provide data and technical support as requested by the Commission.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3433.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70705	42 U.S.C. 16845.	Pub. L. 109–155, title VIII, § 825, Dec. 30, 2005, 119 Stat. 2942.

§ 70706. Public meetings, information, and hearings

(a) PUBLIC MEETINGS AND RELEASE OF PUBLIC VERSIONS OF REPORTS.—A Commission shall—

(1) hold public hearings and meetings to the extent appropriate; and

(2) release public versions of the reports required under this chapter.

(b) PUBLIC HEARINGS.—Any public hearings of a Commission shall be conducted in a manner consistent with the protection of information provided to or developed for or by the Commission as required by any applicable statute, regulation, or Executive order.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3434.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70706	42 U.S.C. 16846.	Pub. L. 109–155, title VIII, § 826, Dec. 30, 2005, 119 Stat. 2943.

§ 70707. Staff of Commission

(a) APPOINTMENT AND COMPENSATION.—The Chairman, in consultation with the Vice Chairman, in accordance with rules agreed upon by a Commission, may appoint and fix the compensation of a staff director and such other personnel as may be necessary to enable the Commission to carry out its functions.

(b) DETAILEES.—Any Federal Government employee, except for an employee of the Administration, may be detailed to a Commission without reimbursement from the Commission, and such detailee shall retain the rights, status, and privileges of his or her regular employment without interruption.

(c) CONSULTANT SERVICES.—A Commission may procure the services of experts and consultants in accordance with section 3109 of title 5, but at rates not to exceed the daily equivalent of the annual rate of basic pay in effect for positions at level IV of the Executive Schedule under section 5315 of title 5. An expert or consultant whose services are procured under this subsection shall disclose any contract or association the expert or consultant has with the Administration or any Administration contractor.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3435.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70707	42 U.S.C. 16847.	Pub. L. 109–155, title VIII, § 827, Dec. 30, 2005, 119 Stat. 2943.

In subsection (c), in the 1st sentence, the words ''the daily equivalent of the annual rate of basic pay in effect for positions at level IV of the Executive Schedule under section 5315 of title 5'' are substituted for ''the daily rate paid a person occupying a position at level IV of the Executive Schedule under section 5315 of title 5'' for consistency in title 51.

In subsection (c), in the last sentence, the words ''the expert or consultant'' are substituted for ''it'' for clarity.

§ 70708. Compensation and travel expenses

(a) COMPENSATION.—Each member of a Commission may be compensated at a rate not to exceed the daily equivalent of the annual rate of basic pay in effect for positions at level IV of the Executive Schedule under section 5315 of title 5 for each day during which that member is engaged in the actual performance of the duties of the Commission.

(b) TRAVEL EXPENSES.—While away from their homes or regular places of business in the performance of services for the Commission, members of a Commission shall be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in the Government service are allowed expenses under section 5703 of title 5.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3435.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70708	42 U.S.C. 16848.	Pub. L. 109–155, title VIII, § 828, Dec. 30, 2005, 119 Stat. 2944.

In subsection (a), the words ''at a rate not to exceed the daily equivalent of the annual rate'' for ''at not to exceed the daily equivalent of the annual rate'' for consistency in title 51.

In subsection (b), the words ''section 5703 of title 5'' are substituted for ''section 5703(b) of title 5'' to correct an error in the law. Section 5703 of title 5, United States Code, does not contain a subsection (b).

§ 70709. Security clearances for Commission members and staff

The appropriate Federal agencies or departments shall cooperate with a Commission in expeditiously providing to the Commission members and staff appropriate security clearances to the extent possible pursuant to existing procedures and requirements. No person shall be provided with access to classified information under this chapter without the appropriate security clearances.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3435.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70709	42 U.S.C. 16849.	Pub. L. 109–155, title VIII, § 829, Dec. 30, 2005, 119 Stat. 2944.

§ 70710. Reporting requirements and termination

(a) INTERIM REPORTS.—A Commission may submit to the President and Congress interim reports containing such findings, conclusions, and recommendations for corrective actions as have been agreed to by a majority of Commission members.

(b) FINAL REPORT.—A Commission shall submit to the President and Congress, and make

concurrently available to the public, a final report containing such findings, conclusions, and recommendations for corrective actions as have been agreed to by a majority of Commission members. Such report shall include any minority views or opinions not reflected in the majority report.

(c) TERMINATION.—

(1) IN GENERAL.—A Commission, and all the authorities of this chapter with respect to that Commission, shall terminate 60 days after the date on which the final report is submitted under subsection (b).

(2) ADMINISTRATIVE ACTIVITIES BEFORE TERMINATION.—A Commission may use the 60-day period referred to in paragraph (1) for the purpose of concluding its activities, including providing testimony to committees of Congress concerning its reports and disseminating the final report.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3436.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70710	42 U.S.C. 16850.	Pub. L. 109–155, title VIII, § 830, Dec. 30, 2005, 119 Stat. 2944.

CHAPTER 709—INTERNATIONAL SPACE STATION

Editorial Notes

AMENDMENTS

2022—Pub. L. 117–167, div. B, title VII, § 10815(d)(2), Aug. 9, 2022, 136 Stat. 1738, substituted ''Maintaining use through at least 2030.'' for ''Maintaining use through at least 2024.'' in item 70907.

2015—Pub. L. 114–90, title I, § 114(b)(5)(B), Nov. 25, 2015, 129 Stat. 716, substituted ''Maintaining use through at least 2024.'' for ''Maintaining use through at least 2020.'' in item 70907.

§ 70901. Peaceful uses of space station

No civil space station authorized under section 103(a)(1) of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1991 (Public Law 101–611, 104 Stat. 3190) may be used to carry or place in orbit any nuclear weapon or any other weapon of mass destruction, to install any such weapon on any celestial body, or to station any such weapon in space in any other manner. This civil space station may be used only for peaceful purposes.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3436.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70901	(not previously classified)	Pub. L. 101–611, title I, § 123, Nov. 16, 1990, 104 Stat. 3204.

The words ''the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1991 (Public Law 101–611, 104 Stat. 3190)'' are substituted for ''this Act'' to clarify the reference.

Editorial Notes

REFERENCES IN TEXT

Section 103(a)(1) of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1991 (Public Law 101–611, 104 Stat. 3190), referred to in text, is not classified to the Code.

Statutory Notes and Related Subsidiaries

PRIORITIES FOR INTERNATIONAL SPACE STATION

Pub. L. 117–167, div. B, title VII, § 10816, Aug. 9, 2022, 136 Stat. 1739, provided that:

''(a) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall assess International Space Station research activities and shall ensure that crew time and resources allocated to the [National Aeronautics and Space] Administration for use on the International Space Station prioritize—

''(1) the research of the Human Research Program, including research on and development of countermeasures relevant to reducing human health and performance risks, behavioral and psychological risks, and other astronaut safety risks related to long-duration human spaceflight;

''(2) risk reduction activities relevant to exploration technologies, including for the Environmental Control and Life Support System, extravehicular activity and space suits, environmental monitoring, safety, emergency response, and deep space communications;

''(3) the advancement of United States leadership in basic and applied space life and physical science research, consistent with the priorities of the most recent space life and physical sciences decadal survey of the National Academies of Sciences, Engineering, and Medicine; and

''(4) other research and development activities identified by the Administrator as essential to Moon to Mars activities.

''(b) REPORTS.—

''(1) ASSESSMENT AND PRIORITIZATION.—Not later than 180 days after the date of the enactment of this Act [Aug. 9, 2022], the Administrator shall submit to the appropriate committees of Congress [Committee on Commerce, Science, and Transportation of the Senate and Committee on Science, Space, and Technology of the House of Representatives] a report on—

''(A) the assessment; and

''(B) the steps taken to achieve the prioritization required by subsection (a).

''(2) SPACE FLIGHT PARTICIPANTS.—Not later than 120 days after the date of the enactment of this Act, the Administrator shall submit to the appropriate committees of Congress a report on measures taken, with respect to space flight participants aboard the ISS [International Space Station], to ensure government astronaut safety, to avoid interference in ISS operations and research priorities, and to prevent undue demands on crew time and resources.

''(3) ANNUAL PROGRESS REPORTS.—Concurrent with the annual budget submission of the President to Congress under section 1105(a) of title 31, United States Code, the Administrator shall provide to the appropriate committees of Congress an annual accounting of the use of Administration crew time and ISS resources, including the allocation of such resources toward the priorities described in subsection (a).''

[For definitions of ''deep space'', ''space flight participant'', and ''government astronaut'' as used in section 10816 of Pub. L. 117–167, set out above, see section 10802 of Pub. L. 117–167, set out as a Definitions note under section 10101 of this title.]

INTERNATIONAL SPACE STATION

Pub. L. 110–69, title II, §2006, Aug. 9, 2007, 121 Stat. 584, provided that:

''(a) SENSE OF CONGRESS.—It is the sense of Congress that the International Space Station National Laboratory offers unique opportunities for educational activities and provides a unique resource for research and development in science, technology, and engineering, which can enhance the global competitiveness of the United States.

''(b) DEVELOPMENT OF EDUCATIONAL PROJECTS.—The Administrator of the National Aeronautics and Space Administration shall develop a detailed plan for implementation of 1 or more education projects that utilize the resources offered by the International Space Station. In developing any detailed plan according to this paragraph, the Administrator shall make use of the findings and recommendations of the International Space Station National Laboratory Education Concept Development Task Force.

''(c) DEVELOPMENT OF RESEARCH PLANS FOR COMPETITIVENESS ENHANCEMENT.—The Administrator shall develop a detailed plan for identification and support of research to be conducted aboard the International Space Station, which offers the potential for enhancement of United States competitiveness in science, technology, and engineering. In developing any detailed plan pursuant to this subsection, the Administrator shall consult with agencies and entities with which cooperative agreements have been reached regarding utilization of International Space Station National Laboratory facilities.''

Pub. L. 106–391, title II, §§201–203, 205, Oct. 30, 2000, 114 Stat. 1586–1590, as amended by Pub. L. 108–271, §8(b), July 7, 2004, 118 Stat. 814; Pub. L. 109–155, title II, §207(b), title VII, §706(a), Dec. 30, 2005, 119 Stat. 2916, 2937, provided that:

''SEC. 201. INTERNATIONAL SPACE STATION CONTINGENCY PLAN.

''(a) BIMONTHLY REPORTING ON RUSSIAN STATUS.—Not later than the first day of the first month beginning more than 60 days after the date of the enactment of this Act [Oct. 30, 2000], and semiannually thereafter until December 31, 2011, the Administrator [of the National Aeronautics and Space Administration] shall report to Congress whether or not the Russians have performed work expected of them and necessary to complete the International Space Station. Each such report shall also include a statement of the Administrator's judgment concerning Russia's ability to perform work anticipated and required to complete the International Space Station before the next report under this subsection. Each such report shall also identify each Russian entity or person to whom NASA has, since the date of the enactment of the Iran Nonproliferation Amendments Act of 2005 [Nov. 22, 2005], made a payment in cash or in-kind for work to be performed or services to be rendered under the Agreement Concerning Cooperation on the Civil International Space Station, with annex, signed at Washington January 29, 1998, and entered into force March 27, 2001, or any protocol, agreement, memorandum of understanding, or contract related thereto. Each report shall include the specific purpose of each payment made to each entity or person identified in the report.

''(b) DECISION ON RUSSIAN CRITICAL PATH ITEMS.—The President shall notify Congress within 90 days after the date of the enactment of this Act [Oct. 30, 2000] of the decision on whether or not to proceed with permanent replacement of any Russian elements in the critical path [as defined in section 3 of Pub. L. 106–391, 51 U.S.C. 10101 note] of the International Space Station or any Russian launch services. Such notification shall include the reasons and justifications for the decision and the costs associated with the decision. Such decision shall include a judgment of when all elements identified in Revision E assembly sequence as of June 1999 will be in orbit and operational. If the President decides to proceed with a permanent replacement for any Russian element in the critical path or any Russian launch services, the President shall notify Congress of the reasons and the justification for the decision to proceed with the permanent replacement and the costs associated with the decision.

''(c) ASSURANCES.—The United States shall seek assurances from the Russian Government that it places a higher priority on fulfilling its commitments to the International Space Station than it places on extending the life of the Mir Space Station, including assurances that Russia will not utilize assets allocated by Russia to the International Space Station for other purposes, including extending the life of Mir.

''(d) EQUITABLE UTILIZATION.—In the event that any International Partner in the International Space Station Program willfully violates any of its commitments or agreements for the provision of agreed-upon Space Station-related hardware or related goods or services, the Administrator should, in a manner consistent with relevant international agreements, seek a commensurate reduction in the utilization rights of that Partner until such time as the violated commitments or agreements have been fulfilled.

''(e) OPERATION COSTS.—The Administrator shall, in a manner consistent with relevant international agreements, seek to reduce the National Aeronautics and Space Administration's share of International Space Station common operating costs, based upon any additional capabilities provided to the International Space Station through the National Aeronautics and Space Administration's Russian Program Assurance activities.

''[SEC. 202. Repealed. Pub. L. 109–155, title II, §207(b), Dec. 30, 2005, 119 Stat. 2916, effective 30 days after Dec. 1, 2006.]

''SEC. 203. RESEARCH ON INTERNATIONAL SPACE STATION.

''(a) STUDY.—The Administrator [of the National Aeronautics and Space Administration] shall enter into a contract with the National Research Council and the National Academy of Public Administration to jointly conduct a study of the status of life and microgravity research as it relates to the International Space Station. The study shall include—

''(1) an assessment of the United States scientific community's readiness to use the International Space Station for life and microgravity research;

''(2) an assessment of the current and projected factors limiting the United States scientific community's ability to maximize the research potential of the International Space Station, including, but not limited to, the past and present availability of resources in the life and microgravity research accounts within the Office of Human Spaceflight and the Office of Life and Microgravity Sciences and Applications and the past, present, and projected access to space of the scientific community; and

''(3) recommendations for improving the United States scientific community's ability to maximize the research potential of the International Space Station, including an assessment of the relative costs and benefits of—

''(A) dedicating an annual mission of the Space Shuttle to life and microgravity research during assembly of the International Space Station; and

''(B) maintaining the schedule for assembly in place at the time of the enactment [Oct. 30, 2000].

''(b) REPORT.—Not later than 1 year after the date of the enactment of this Act [Oct. 30, 2000], the Administrator shall transmit to the Committee on Science [now Committee on Science, Space, 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 this section.

''SEC. 205. SPACE STATION RESEARCH UTILIZATION AND COMMERCIALIZATION MANAGEMENT.

''(a) RESEARCH UTILIZATION AND COMMERCIALIZATION MANAGEMENT ACTIVITIES.—The Administrator of the

National Aeronautics and Space Administration shall enter into an agreement with a non-government organization to conduct research utilization and commercialization management activities of the International Space Station subsequent to substantial completion as defined in section 202(b)(3). The agreement may not take effect less than 120 days after the implementation plan for the agreement is submitted to the Congress under subsection (b).

''(b) IMPLEMENTATION PLAN.—Not later than September 30, 2001, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives an implementation plan to incorporate the use of a non-government organization for the International Space Station. The implementation plan shall include—

''(1) a description of the respective roles and responsibilities of the Administration and the non-government organization;

''(2) a proposed structure for the non-government organization;

''(3) a statement of the resources required;

''(4) a schedule for the transition of responsibilities; and

''(5) a statement of the duration of the agreement.''

[Pub. L. 109–155, title VII, § 706(a)(2), Dec. 30, 2005, 119 Stat. 2937, which directed insertion of two sentences at end of section 201 of Pub. L. 106–391, set out above, was executed by making the insertion at the end of section 201(a) of Pub. L. 106–391, to reflect the probable intent of Congress.]

PERMANENTLY MANNED SPACE STATION

Pub. L. 100–147, title I, §§ 106–112, Oct. 30, 1987, 101 Stat. 863–865, as amended by Pub. L. 102–195, § 16, Dec. 9, 1991, 105 Stat. 1614; Pub. L. 105–362, title XI, § 1101(c), Nov. 10, 1998, 112 Stat. 3292, provided that:

''SEC. 106. (a) The Administrator [of the National Aeronautics and Space Administration] is directed to undertake the construction of a permanently manned space station (hereinafter referred to as the 'space station') to become operational in 1995. The space station will be used for the following purposes—

''(1) the conduct of scientific experiments, applications experiments, and engineering experiments;

''(2) the servicing, rehabilitation, and construction of satellites and space vehicles;

''(3) the development and demonstration of commercial products and processes; and

''(4) the establishment of a space base for other civilian and commercial space activities.

''(b) The space station shall be developed and operated in a manner that supports other science and space activities.

''(c) In order to reduce the cost of operations of the space station and its ground support system, the Administrator shall undertake the development of such advanced technologies as may be appropriate within the level of funding authorized in this Act [see Tables for classification].

''(d) The Administrator shall seek to have portions of the space station constructed and operated by the private sector, where appropriate.

''(e) The Administrator shall promote international cooperation in the space station program by undertaking the development, construction, and operation of the space station in conjunction with (but not limited to) the Governments of Europe, Japan, and Canada.

''(f) The space station shall be designed, developed, and operated in a manner that enables evolutionary enhancement.

''[SEC. 107. Repealed. Pub. L. 105–362, title XI, § 1101(c), Nov. 10, 1998, 112 Stat. 3292.]

''SEC. 108. In order to ensure that the development of the space station is part of a balanced civilian space program, the Administrator is instructed to establish as a goal a funding profile that limits (1) space station total annual costs under the capital development plan in section 107 to 25 percent of the total budget request for the National Aeronautics and Space Administration and (2) all space station direct operations costs, except for those costs associated with the utilization of the space station, to 10 percent of the total budget request for the National Aeronautics and Space Administration.

''SEC. 109. (a) It is the sense of the Congress that the launching and servicing of the space station should be accomplished by the most cost-effective use of space transportation systems, including the space shuttle and expendable launch vehicles.

''(b) Not later than January 15, 1988, the Administrator shall submit a preliminary report on the cost-effective use of space transportation systems for the launch of space station elements during the development and operation of the space station. The Administrator shall consider—

''(1) the potential use of future advanced or heavy lift expendable launch vehicles for purposes of the assembly and operation of the space station;

''(2) the use of existing expendable launch vehicles of the National Aeronautics and Space Administration, the Department of Defense, and the Private Sector;

''(3) the requirement for space shuttle launches; and

''(4) the risk of capital losses from the use of expendable launch vehicles and the space shuttle.

''SEC. 110. (a) The Administrator shall set and collect reasonable user fees for the use and maintenance of the space station.

''(b) The Administrator shall set user fees so as to—

''(1) promote the use of the space station consistent with the policy set forth in section 106;

''(2) recover the costs of the use of the space station, including reasonable charges for any enhancement needed for such use; and

''(3) conserve and efficiently allocate the resources of the space station.

''(c) The Administrator may, on a case-by-case basis, waive or modify such user fees when in the Administrator's judgment such waiver or modification will further the goals and purposes of the National Aeronautics and Space Act of 1958 [see 51 U.S.C. 20101 et seq.], including—

''(1) the advancement of scientific or engineering knowledge;

''(2) international cooperation; and

''(3) the commercial use of space.

''SEC. 111. No later than September 30, 1988, the Administrator shall submit a detailed plan for collecting reimbursements for the utilization of the space station under section 110, including the services to be offered, the methodology and bases by which prices will be charged, and the estimated revenues.

''SEC. 112. The Intergovernmental Agreement currently being negotiated between the United States Government and Canada, Japan, and member governments of the European Space Agency, and the Memorandum of Understanding currently being negotiated between the National Aeronautics and Space Administration and its counterpart agencies in Canada, Japan, and Europe concerning the detailed design, development, construction, operation, or utilization of the space station shall be submitted to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives. No such agreement shall take effect until 30 days have passed after the receipt by such committees of the agreement.''

§ 70902. Allocation of International Space Station research budget

The Administrator shall allocate at least 15 percent of the funds budgeted for International Space Station research to ground-based, free-flyer, and International Space Station life and microgravity science research that is not di-

rectly related to supporting the human exploration program, consistent with section 40904 of this title.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3436.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70902	42 U.S.C. 16633.	Pub. L. 109–155, title II, § 204, Dec. 30, 2005, 119 Stat. 2916.

The words ''Beginning with fiscal year 2006'', which appeared at the beginning of this section, are omitted as obsolete.

§ 70903. International Space Station research

The Administrator shall—

(1) carry out a program of microgravity research consistent with section 40904 of this title; and

(2) consider the need for a life sciences centrifuge and any associated holding facilities.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3436.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70903	42 U.S.C. 16766(1), (2).	Pub. L. 109–155, title V, § 506(1), (2), Dec. 30, 2005, 119 Stat. 2930.

§ 70904. International Space Station completion

(a) POLICY.—It is the policy of the United States to achieve diverse and growing utilization of, and benefits from, the International Space Station.

(b) ELEMENTS, CAPABILITIES, AND CONFIGURATION CRITERIA.—The Administrator shall ensure that the International Space Station will—

(1) be assembled and operated in a manner that fulfills international partner agreements, as long as the Administrator determines that the shuttle can safely enable the United States to do so;

(2) be used for a diverse range of microgravity research, including fundamental, applied, and commercial research, consistent with section 40904 of this title;

(3) have an ability to support a crew size of at least 6 persons, unless the Administrator transmits 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 60 days after December 30, 2005, a report explaining why such a requirement should not be met, the impact of not meeting the requirement on the International Space Station research agenda and operations and international partner agreements, and what additional funding or other steps would be required to have an ability to support a crew size of at least 6 persons;

(4) support Crew Exploration Vehicle docking and automated docking of cargo vehicles or modules launched by either heavy-lift or commercially-developed launch vehicles;

(5) support any diagnostic human research, on-orbit characterization of molecular crystal growth, cellular research, and other research that the Administration believes is necessary to conduct, but for which the Administration lacks the capacity to return the materials that need to be analyzed to Earth; and

(6) be operated at an appropriate risk level.

(c) CONTINGENCIES.—

(1) POLICY.—The Administrator shall ensure that the International Space Station can have available, if needed, sufficient logistics and on-orbit capabilities to support any potential period during which the space shuttle or its follow-on crew and cargo systems are unavailable, and can have available, if needed, sufficient surge delivery capability or prepositioning of spares and other supplies needed to accommodate any such hiatus.

(2) PLAN.—Before making any change in the International Space Station assembly sequence in effect on December 30, 2005, 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 a plan to carry out the policy described in paragraph (1).

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3437.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70904	42 U.S.C. 16765.	Pub. L. 109–155, title V, § 505, Dec. 30, 2005, 119 Stat. 2929.

In subsections (b)(3) and (c)(2), the words ''Committee on Science and Technology'' are substituted for ''Committee on Science'' on authority of Rule X(1)(*o*) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

In subsections (b)(3) and (c)(2), the date ''December 30, 2005'' is substituted for ''the date of enactment of this Act'' to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

In subsection (c)(2) the words ''Not later than 60 days after the date of enactment of this Act [December 30, 2005], and'' are omitted as obsolete.

Statutory Notes and Related Subsidiaries

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§ 70905. National laboratory designation

(a) DEFINITION OF UNITED STATES SEGMENT OF THE INTERNATIONAL SPACE STATION.—In this section the term ''United States segment of the International Space Station'' means those elements of the International Space Station manufactured—

(1) by the United States; or

(2) for the United States by other nations in exchange for funds or launch services.

(b) DESIGNATION.—To further the policy described in section 70501(a) of this title, the United States segment of the International

Space Station is hereby designated a national laboratory.

(c) MANAGEMENT.—

(1) PARTNERSHIPS.—The Administrator shall seek to increase the utilization of the International Space Station by other Federal entities and the private sector through partnerships, cost-sharing agreements, and other arrangements that would supplement Administration funding of the International Space Station.

(2) CONTRACTING.—The Administrator may enter into a contract with a nongovernmental entity to operate the International Space Station national laboratory, subject to all applicable Federal laws and regulations.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3437.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70905(a)	42 U.S.C. 16767(d).	Pub. L. 109–155, title V, § 507(a), (b), (d), Dec. 30, 2005, 119 Stat. 2930, 2931.
70905(b)	42 U.S.C. 16767(a).	
70905(c)	42 U.S.C. 16767(b).	

§ 70906. International Space Station National Laboratory Advisory Committee

(a) ESTABLISHMENT.—Not later than one year after October 15, 2008, the Administrator shall establish under chapter 10 of title 5 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 that have formal agreements with the Administration 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.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3438; Pub. L. 117–286, § 4(a)(327), Dec. 27, 2022, 136 Stat. 4342.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70906	42 U.S.C. 17752.	Pub. L. 110–422, title VI, § 602, Oct. 15, 2008, 122 Stat. 4795.

In subsection (a), the date ''October 15, 2008'' is substituted for ''the date of enactment of this Act'' to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110–422, 122 Stat. 4779).

Editorial Notes

AMENDMENTS

2022—Subsec. (a). Pub. L. 117–286 substituted ''chapter 10 of title 5'' for ''the Federal Advisory Committee Act''.

§ 70907. Maintaining use through at least 2030

(a) POLICY.—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 September 30, 2030.

(b) NASA ACTIONS.—In furtherance of the policy under subsection (a), the Administrator shall ensure, to the extent practicable, that the International Space Station, as a designated national laboratory—

(1) remains viable as an element of overall exploration and partnership strategies and approaches;

(2) is considered for use by all NASA mission directorates, as appropriate, for technically appropriate scientific data gathering or technology risk reduction demonstrations; and

(3) remains an effective, functional vehicle providing research and test bed capabilities for the United States through at least September 30, 2030.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3438; Pub. L. 114–90, title I, § 114(b)(4), Nov. 25, 2015, 129 Stat. 716; Pub. L. 117–167, div. B, title VII, § 10815(d)(1), Aug. 9, 2022, 136 Stat. 1738.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
70907	42 U.S.C. 17751(a).	Pub. L. 110–422, title VI, § 601(a), Oct. 15, 2008, 122 Stat. 4793.

Editorial Notes

AMENDMENTS

2022—Pub. L. 117–167, § 10815(d)(1)(A), substituted ''2030'' for ''2024'' in section catchline.

Subsec. (a). Pub. L. 117–167, § 10815(d)(1)(B), substituted ''September 30, 2030'' for ''September 30, 2024''.

Subsec. (b)(3). Pub. L. 117–167, § 10815(d)(1)(C), substituted ''September 30, 2030'' for ''September 30, 2024''.

2015—Pub. L. 114–90 amended section generally. Prior to amendment, section related to maintaining the International Space Station as a viable and productive facility capable of potential United States utilization through at least 2020.

CHAPTER 711—NEAR-EARTH OBJECTS

Statutory Notes and Related Subsidiaries

PLANETARY DEFENSE COORDINATION OFFICE

Pub. L. 117–167, div. B, title VII, § 10825, Aug. 9, 2022, 136 Stat. 1744, provided that:

''(a) FINDINGS.—Congress makes the following findings:

''(1) Near-Earth objects remain a threat to the United States.

''(2) Section 321(d)(1) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.) [set out below], established a requirement that the Administrator [of the National Aeronautics and Space Administration] plan, develop, and implement a Near-Earth Object Survey program to detect, track, catalogue, and characterize the physical characteristics of near-Earth objects equal to, or greater than, 140 meters in diameter in order to assess the threat of such near-Earth objects to the Earth, with the goal of 90 percent completion of the catalogue of such near-Earth objects by December 30, 2020.

''(3) The goal described in paragraph (2) has not be met.

''(4) The report of the National Academies of Sciences, Engineering, and Medicine entitled 'Finding Hazardous Asteroids Using Infrared and Visible Wavelength Telescopes', issued in 2019, states that—

''(A) NASA [National Aeronautics and Space Administration] should develop and launch a dedicated space-based infrared survey telescope to meet the requirements of section 321(d)(1) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.); and

''(B) the early detection of potentially hazardous near-Earth objects enabled by a space-based infrared survey telescope is important to enable deflection of a dangerous asteroid.

''(b) MAINTENANCE OF PLANETARY DEFENSE COORDINATION OFFICE.—The Administrator shall maintain an office within the Planetary Science Division of the Science Mission Directorate, to be known as the 'Planetary Defense Coordination Office'—

''(1) to plan, develop, and implement a program to survey threats posed by near-Earth objects equal to or greater than 140 meters in diameter, as required by section 321(d)(1) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.);

''(2) identify, track, and characterize potentially hazardous near-Earth objects, issue warnings of the effects of potential impacts of such objects, and investigate strategies and technologies for mitigating the potential impacts of such objects; and

''(3) assist in coordinating government planning for response to a potential impact of a near-Earth object.

''(c) DEDICATED SURVEY MISSION.—

''(1) SENSE OF CONGRESS.—It is the sense of Congress that—

''(A) the Near-Earth Object Surveyor mission, as designed, is anticipated to make significant progress toward carrying out congressional policy and direction, as set forth in section 321(d)(1) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.), to detect 90 percent of near-Earth objects equal to, or greater than, 140 meters in diameter; and

''(B) the Administrator should prioritize the public safety role of the Near-Earth Object Surveyor mission and should not delay the development and launch of the mission due to cost growth on other planetary science missions.

''(2) CONTINUATION OF MISSION.—

''(A) IN GENERAL.—The Administrator shall continue the development of a dedicated space-based infrared survey telescope mission, known as the 'Near-Earth Object Surveyor', on a schedule to achieve a launch-readiness date not later than March 30, 2026, or the earliest practicable date, for the purpose of accomplishing the objectives set forth in section 321(d)(1) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.).

''(B) CONSIDERATION OF RECOMMENDATIONS.—The design of the mission described in subparagraph (A) shall take into account the recommendations of the 2019 report of the National Academies of Sciences, Engineering, and Medicine entitled 'Finding Hazardous Asteroids Using Infrared and Visible Wavelength Telescopes', the planetary science decadal survey, and the 2018 United States National Near-Earth Object Preparedness Strategy and Action Plan.

''(d) Annual Report.—[Amended section 321(f) of Pub. L. 109–155, set out below.]

''(e) NEAR-EARTH OBJECT DEFINED.—In this section, the term 'near-Earth object' has the meaning given the term in section 321(c) of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155; 119 Stat. 2922; 51 U.S.C. 71101 note prec.).''

GEORGE E. BROWN, JR. NEAR-EARTH OBJECT SURVEY

Pub. L. 109–155, title III, §321, Dec. 30, 2005, 119 Stat. 2922, as amended by Pub. L. 115–10, title V, §511, Mar. 21, 2017, 131 Stat. 51; Pub. L. 117–167, div. B, title VII, §10825(d), Aug. 9, 2022, 136 Stat. 1745, provided that:

''(a) SHORT TITLE.—This section may be cited as the 'George E. Brown, Jr. Near-Earth Object Survey Act'.

''(b) FINDINGS.—The 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) Similar objects have struck the Earth or passed through the Earth's atmosphere several times in the Earth's history and pose a similar threat in the future.

''(3) 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.

''(4) The efforts taken to date by NASA [National Aeronautics and Space Administration] for detecting and characterizing the hazards of near-Earth objects are not sufficient to fully determine the threat posed by such objects to cause widespread destruction and loss of life.

''(c) DEFINITIONS.—For purposes of this section the term 'near-Earth object' means an asteroid or comet with a perihelion distance of less than 1.3 Astronomical Units from the Sun.

''(d) NEAR-EARTH OBJECT SURVEY.—

''(1) SURVEY PROGRAM.—The Administrator [of the National Aeronautics and Space Administration] shall plan, develop, and implement a Near-Earth Object Survey program to detect, track, catalogue, and characterize the physical characteristics of near-Earth objects equal to or greater than 140 meters in diameter in order to assess the threat of such near-Earth objects to the Earth. It shall be the goal of the Survey program to achieve 90 percent completion of its near-Earth object catalogue (based on statistically predicted populations of near-Earth objects) within 15 years after the date of enactment of this Act [Dec. 30, 2005].

''(2) [Amended former section 2451 of Title 42, The Public Health and Welfare.]

''(3) FIFTH-YEAR REPORT.—The Administrator shall transmit to the Congress, not later than February 28 of the fifth year after the date of enactment of this Act, a report that provides the following:

''(A) A summary of all activities taken pursuant to paragraph (1) since the date of enactment of this Act.

''(B) A summary of expenditures for all activities pursuant to paragraph (1) since the date of enactment of this Act.

''(4) INITIAL REPORT.—The Administrator shall transmit to Congress not later than 1 year after the date of enactment of this Act an initial report that provides the following:

''(A) An analysis of possible alternatives that NASA may employ to carry out the Survey program, including ground-based and space-based alternatives with technical descriptions.

''(B) A recommended option and proposed budget to carry out the Survey program pursuant to the recommended option.

''(C) Analysis of possible alternatives that NASA could employ to divert an object on a likely collision course with Earth.

''(e) PROGRAM REPORT.—The Director of the Office of Science and Technology Policy and the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives, not later than 1 year after the date of enactment of the National Aeronautics and Space Administration Transition Authorization Act of 2017 [Mar. 21, 2017], an initial report that provides—

''(1) recommendations for carrying out the Survey program and an associated proposed budget;

''(2) an analysis of possible options that the Administration could employ to divert an object on a likely collision course with Earth; and

''(3) a description of the status of efforts to coordinate and cooperate with other countries to discover hazardous asteroids and comets, plan a mitigation strategy, and implement that strategy in the event of the discovery of an object on a likely collision course with Earth.

''(f) ANNUAL REPORT.—Not later than 180 days after the date of the enactment of the National Aeronautics and Space Administration Authorization Act of 2022 [Aug. 9, 2022] and annually thereafter through 90-percent completion of the catalogue required by subsection (d)(1), the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report that includes the following:

''(1) A summary of all activities carried out by the Planetary Defense Coordination Office established under section 10825 of the National Aeronautics and Space Administration Authorization Act of 2022 [Pub. L. 117–167, set out above] since the date of enactment of that Act.

''(2) A description of the progress with respect to the design, development, and launch of the space-based infrared survey telescope required by section 10825(c) of the National Aeronautics and Space Administration Authorization Act of 2022.

''(3) An assessment of the progress toward meeting the requirements under subsection (d)(1).

''(4) A description of the status of efforts to coordinate and cooperate with other countries to detect hazardous asteroids and comets, plan a mitigation strategy, and implement that strategy in the event of the discovery of an object on a likely collision course with Earth.

''(5) A summary of expenditures for all activities carried out by the Planetary Defense Coordination Office since the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2022[.]

''(g) ASSESSMENT.—The Administrator, in collaboration with other relevant Federal agencies, shall carry out a technical and scientific assessment of the capabilities and resources—

''(1) to accelerate the survey described in subsection (d); and

''(2) to expand the Administration's Near-Earth Object Program to include the detection, tracking, cataloguing, and characterization of potentially hazardous near-Earth objects less than 140 meters in diameter.

''(h) TRANSMITTAL.—Not later than 270 days after the date of enactment of the National Aeronautics and Space Administration Transition Authorization Act of 2017, the Administrator shall transmit the results of the assessment under subsection (g) to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives.''

§ 71101. Reaffirmation of policy

Congress reaffirms the policy set forth in section 20102(g) of this title (relating to surveying near-Earth asteroids and comets).

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3439.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71101	42 U.S.C. 17791(a).	Pub. L. 110–422, title VIII, § 801(a), Oct. 15, 2008, 122 Stat. 4803.

Statutory Notes and Related Subsidiaries

FINDINGS

Pub. L. 110–422, title VIII, § 802, Oct. 15, 2008, 122 Stat. 4803, provided that: ''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.''

§ 71102. 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,[1] 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.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3439.)

[1] So in original. The comma probably should be preceded by ''to''.

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71102	42 U.S.C. 17793.	Pub. L. 110–422, title VIII, § 803, Oct. 15, 2008, 122 Stat. 4803.

§ 71103. Developing policy and recommending responsible Federal agency

Within 2 years after October 15, 2008, the Director of the Office of Science and Technology Policy 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.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3439.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71103	42 U.S.C. 17794.	Pub. L. 110–422, title VIII, § 804, Oct. 15, 2008, 122 Stat. 4804.

In the matter before paragraph (1), the date ''October 15, 2008'' is substituted for ''the date of enactment of this Act'' to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2008.

§ 71104. Planetary radar

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

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3439.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71104	42 U.S.C. 17795.	Pub. L. 110–422, title VIII, § 805, Oct. 15, 2008, 122 Stat. 4804.

CHAPTER 713—COOPERATION FOR SAFETY AMONG SPACEFARING NATIONS

Sec.

§ 71301. Common docking system standard to enable 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.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3439.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71301	42 U.S.C. 17734.	Pub. L. 110–422, title IV, § 407, Oct. 15, 2008, 122 Stat. 4790.

§ 71302. Information sharing to avoid physical or radio-frequency interference

The Administrator shall, in consultation with other agencies of the Federal Government as the Administrator considers appropriate, initiate discussions with the appropriate representatives of spacefaring nations to determine an appropriate frame-work 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 the nations.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3440.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
71302	42 U.S.C. 17821(b).	Pub. L. 110–422, title XI, § 1102(b), Oct. 15, 2008, 122 Stat. 4808.

Statutory Notes and Related Subsidiaries

FINDING

Pub. L. 110–422, title XI, § 1102(a), Oct. 15, 2008, 122 Stat. 4808, provided that: ''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.''

Executive Documents

SPACE POLICY DIRECTIVE–3. NATIONAL SPACE TRAFFIC MANAGEMENT POLICY

Space Policy Directive–3, June 18, 2018, 83 F.R. 28969, provided:

Memorandum for the Vice President[,] the Secretary of State[,] the Secretary of Defense[,] the Secretary of Commerce[,] the Secretary of Transportation[,] the Secretary of Homeland Security[,] the Director of National Intelligence[,] the Director of the Office of Management and Budget[,] the Assistant to the President for National Security Affairs[,] the Administrator of the National Aeronautics and Space Administration[,] the Director of the Office of Science and Technology Policy[,] the Deputy Assistant to the President for Homeland Security and Counterterrorism[, and] the Chairman of the Joint Chiefs of Staff

SECTION 1. *Policy*. For decades, the United States has effectively reaped the benefits of operating in space to enhance our national security, civil, and commercial sectors. Our society now depends on space technologies and space-based capabilities for communications, navigation, weather forecasting, and much more. Given the significance of space activities, the United States considers the continued unfettered access to and freedom

to operate in space of vital interest to advance the security, economic prosperity, and scientific knowledge of the Nation.

Today, space is becoming increasingly congested and contested, and that trend presents challenges for the safety, stability, and sustainability of U.S. space operations. Already, the Department of Defense (DoD) tracks over 20,000 objects in space, and that number will increase dramatically as new, more capable sensors come online and are able to detect smaller objects. DoD publishes a catalog of space objects and makes notifications of potential conjunctions (that is, two or more objects coming together at the same or nearly the same point in time and space). As the number of space objects increases, however, this limited traffic management activity and architecture will become inadequate. At the same time, the contested nature of space is increasing the demand for DoD focus on protecting and defending U.S. space assets and interests.

The future space operating environment will also be shaped by a significant increase in the volume and diversity of commercial activity in space. Emerging commercial ventures such as satellite servicing, debris removal, in-space manufacturing, and tourism, as well as new technologies enabling small satellites and very large constellations of satellites, are increasingly outpacing efforts to develop and implement government policies and processes to address these new activities.

To maintain U.S. leadership in space, we must develop a new approach to space traffic management (STM) that addresses current and future operational risks. This new approach must set priorities for space situational awareness (SSA) and STM innovation in science and technology (S&T), incorporate national security considerations, encourage growth of the U.S. commercial space sector, establish an updated STM architecture, and promote space safety standards and best practices across the international community.

The United States recognizes that spaceflight safety is a global challenge and will continue to encourage safe and responsible behavior in space while emphasizing the need for international transparency and STM data sharing. Through this national policy for STM and other national space strategies and policies, the United States will enhance safety and ensure continued leadership, preeminence, and freedom of action in space.

SEC. 2. *Definitions*. For the purposes of this memorandum, the following definitions shall apply:

(a) Space Situational Awareness shall mean the knowledge and characterization of space objects and their operational environment to support safe, stable, and sustainable space activities.

(b) Space Traffic Management shall mean the planning, coordination, and on-orbit synchronization of activities to enhance the safety, stability, and sustainability of operations in the space environment.

(c) Orbital debris, or space debris, shall mean any human-made space object orbiting Earth that no longer serves any useful purpose.

SEC. 3. *Principles*. The United States recognizes, and encourages other nations to recognize, the following principles:

(a) Safety, stability, and operational sustainability are foundational to space activities, including commercial, civil, and national security activities. It is a shared interest and responsibility of all spacefaring nations to create the conditions for a safe, stable, and operationally sustainable space environment.

(b) Timely and actionable SSA data and STM services are essential to space activities. Consistent with national security constraints, basic U.S. Government-derived SSA data and basic STM services should be available free of direct user fees.

(c) Orbital debris presents a growing threat to space operations. Debris mitigation guidelines, standards, and policies should be revised periodically, enforced domestically, and adopted internationally to mitigate the operational effects of orbital debris.

(d) A STM framework consisting of best practices, technical guidelines, safety standards, behavioral norms, pre-launch risk assessments, and on-orbit collision avoidance services is essential to preserve the space operational environment.

SEC. 4. *Goals*. Consistent with the principles listed in section 3 of this memorandum, the United States should continue to lead the world in creating the conditions for a safe, stable, and operationally sustainable space environment. Toward this end, executive departments and agencies (agencies) shall pursue the following goals as required in section 6 of this memorandum:

(a) *Advance SSA and STM Science and Technology*. The United States should continue to engage in and enable S&T research and development to support the practical applications of SSA and STM. These activities include improving fundamental knowledge of the space environment, such as the characterization of small debris, advancing the S&T of critical SSA inputs such as observational data, algorithms, and models necessary to improve SSA capabilities, and developing new hardware and software to support data processing and observations.

(b) *Mitigate the effect of orbital debris on space activities*. The volume and location of orbital debris are growing threats to space activities. It is in the interest of all to minimize new debris and mitigate effects of existing debris. This fact, along with increasing numbers of active satellites, highlights the need to update existing orbital debris mitigation guidelines and practices to enable more efficient and effective compliance, and establish standards that can be adopted internationally. These trends also highlight the need to establish satellite safety design guidelines and best practices.

(c) *Encourage and facilitate U.S. commercial leadership in S&T, SSA, and STM*. Fostering continued growth and innovation in the U.S. commercial space sector, which includes S&T, SSA, and STM activities, is in the national interest of the United States. To achieve this goal, the U.S. Government should streamline processes and reduce regulatory burdens that could inhibit commercial sector growth and innovation, enabling the U.S. commercial sector to continue to lead the world in STM-related technologies, goods, data, and services on the international market.

(d) *Provide U.S. Government-supported basic SSA data and basic STM services to the public*. The United States should continue to make available basic SSA data and basic STM services (including conjunction and reentry notifications) free of direct user fees while supporting new opportunities for U.S. commercial and non-profit SSA data and STM services.

(e) *Improve SSA data interoperability and enable greater SSA data sharing*. SSA data must be timely and accurate. It is in the national interest of the United States to improve SSA data interoperability and enable greater SSA data sharing among all space operators, consistent with national security constraints. The United States should seek to lead the world in the development of improved SSA data standards and information sharing.

(f) *Develop STM standards and best practices*. As the leader in space, the United States supports the development of operational standards and best practices to promote safe and responsible behavior in space. A critical first step in carrying out that goal is to develop U.S.-led minimum safety standards and best practices to coordinate space traffic. U.S. regulatory agencies should, as appropriate, adopt these standards and best practices in domestic regulatory frameworks and use them to inform and help shape international consensus practices and standards.

(g) *Prevent unintentional radio frequency (RF) interference*. Growing orbital congestion is increasing the risk to U.S. space assets from unintentional RF interference. The United States should continue to improve policies, processes, and technologies for spectrum use (including allocations and licensing) to address these challenges and ensure appropriate spectrum use for current and future operations.

(h) *Improve the U.S. domestic space object registry*. Transparency and data sharing are essential to safe,

stable, and sustainable space operations. Consistent with national security constraints, the United States should streamline the interagency process to ensure accurate and timely registration submissions to the United Nations (UN), in accordance with our international obligations under the Convention on Registration of Objects Launched into Outer Space.

(i) *Develop policies and regulations for future U.S. orbital operations.* Increasing congestion in key orbits and maneuver-based missions such as servicing, survey, and assembly will drive the need for policy development for national security, civil, and commercial sector space activities. Consistent with U.S. law and international obligations, the United States should regularly assess existing guidelines for non-government orbital activities, and maintain a timely and responsive regulatory environment for licensing these activities.

SEC. 5. *Guidelines.* In pursuit of the principles and goals of this policy, agencies should observe the following guidelines:

(a) *Managing the Integrity of the Space Operating Environment.*

(i) Improving SSA coverage and accuracy. Timely, accurate, and actionable data are essential for effective SSA and STM. The United States should seek to minimize deficiencies in SSA capability, particularly coverage in regions with limited sensor availability and sensitivity in detection of small debris, through SSA data sharing, the purchase of SSA data, or the provision of new sensors.

New U.S. sensors are expected to reveal a substantially greater volume of debris and improve our understanding of space object size distributions in various regions of space. However, very small debris may not be sufficiently tracked to enable or justify actionable collision avoidance decisions. As a result, close conjunctions and even collisions with unknown objects are possible, and satellite operators often lack sufficient insight to assess their level of risk when making maneuvering decisions. The United States should develop better tracking capabilities, and new means to catalog such debris, and establish a quality threshold for actionable collision avoidance warning to minimize false alarms.

Through both Government and commercial sector S&T investment, the United States should advance concepts and capabilities to improve SSA in support of debris mitigation and collision avoidance decisions.

(ii) Establishing an Open Architecture SSA Data Repository. Accurate and timely tracking of objects orbiting Earth is essential to preserving the safety of space activities for all. Consistent with section 2274 of title 10, United States Code, a basic level of SSA data in the form of the publicly releasable portion of the DoD catalog is and should continue to be provided free of direct user fees. As additional sources of space tracking data become available, the United States has the opportunity to incorporate civil, commercial, international, and other available data to allow users to enhance and refine this service. To facilitate greater data sharing with satellite operators and enable the commercial development of enhanced space safety services, the United States must develop the standards and protocols for creation of an open architecture data repository. The essential features of this repository would include:

- Data integrity measures to ensure data accuracy and availability;
- Data standards to ensure sufficient quality from diverse sources;
- Measures to safeguard proprietary or sensitive data, including national security information;
- The inclusion of satellite owner-operator ephemerides to inform orbital location and planned maneuvers; and
- Standardized formats to enable development of applications to leverage the data.

To facilitate this enhanced data sharing, and in recognition of the need for DoD to focus on maintaining access to and freedom of action in space, a civil agency should, consistent with applicable law, be responsible for the publicly releasable portion of the DoD catalog and for administering an open architecture data repository. The Department of Commerce should be that civil agency.

(iii) Mitigating Orbital Debris. It is in the interest of all space operators to minimize the creation of new orbital debris. Rapid international expansion of space operations and greater diversity of missions have rendered the current U.S. Government Orbital Debris Mitigation Standard Practices (ODMSP) inadequate to control the growth of orbital debris. These standard practices should be updated to address current and future space operating environments. The United States should develop a new protocol of standard practices to set broader expectations of safe space operations in the 21st century. This protocol should begin with updated ODMSP, but also incorporate sections to address operating practices for large constellations, rendezvous and proximity operations, small satellites, and other classes of space operations. These overarching practices will provide an avenue to promote efficient and effective space safety practices with U.S. industry and internationally.

The United States should pursue active debris removal as a necessary long-term approach to ensure the safety of flight operations in key orbital regimes. This effort should not detract from continuing to advance international protocols for debris mitigation associated with current programs.

(b) *Operating in a Congested Space Environment.*

(i) Minimum Safety Standards and Best Practices. The creation of minimum standards for safe operation and debris mitigation derived in part from the U.S. Government ODMSP, but incorporating other standards and best practices, will best ensure the safe operation of U.S. space activities. These safety guidelines should consider maneuverability, tracking, reliability, and disposal.

The United States should eventually incorporate appropriate standards and best practices into Federal law and regulation through appropriate rulemaking or licensing actions. These guidelines should encompass protocols for all stages of satellite operation from design through end-of-life.

Satellite and constellation owners should participate in a pre-launch certification process that should, at a minimum, consider the following factors:

- Coordination of orbit utilization to prevent conjunctions;
- Constellation owner-operators' management of self-conjunctions;
- Owner-operator notification of planned maneuvers and sharing of satellite orbital location data;
- On-orbit tracking aids, including beacons or sensing enhancements, if such systems are needed;
- Encryption of satellite command and control links and data protection measures for ground site operations;
- Appropriate minimum reliability based on type of mission and phase of operations;
- Effect on the national security or foreign policy interests of the United States, or international obligations; and
- Self-disposal upon the conclusion of operational lifetime, or owner-operator provision for disposal using active debris removal methods.

(ii) On-Orbit Collision Avoidance Support Service. Timely warning of potential collisions is essential to preserving the safety of space activities for all. Basic collision avoidance information services are and should continue to be provided free of direct user fees. The imminent activation of more sensitive tracking sensors is expected to reveal a significantly greater population of the existing orbital debris background as well as provide an improved ability to track currently catalogued objects. Current and future satellites, including large constellations of satellites, will operate in a debris environment much denser than presently tracked. Preventing on-orbit collisions in this environment requires

an information service that shares catalog data, predicts close approaches, and provides actionable warnings to satellite operators. The service should provide data to allow operators to assess proposed maneuvers to reduce risk. To provide on-orbit collision avoidance, the United States should:

• Provide services based on a continuously updated catalog of satellite tracking data;

• Utilize automated processes for collision avoidance;

• Provide actionable and timely conjunction assessments; and

• Provide data to operators to enable assessment of maneuver plans.

To ensure safe coordination of space traffic in this future operating environment, and in recognition of the need for DoD to focus on maintaining access to and freedom of action in space, a civil agency should be the focal point for this collision avoidance support service. The Department of Commerce should be that civil agency.

(c) *Strategies for Space Traffic Management in a Global Context.*

(i) Protocols to Prevent Orbital Conjunctions. As increased satellite operations make lower Earth orbits more congested, the United States should develop a set of standard techniques for mitigating the collision risk of increasingly congested orbits, particularly for large constellations. Appropriate methods, which may include licensing assigned volumes for constellation operation and establishing processes for satellites passing through the volumes, are needed. The United States should explore strategies that will lead to the establishment of common global best practices, including:

• A common process addressing the volume of space used by a large constellation, particularly in close proximity to an existing constellation;

• A common process by which individual spacecraft may transit volumes used by existing satellites or constellations; and

• A set of best practices for the owner-operators of utilized volumes to minimize the long-term effects of constellation operations on the space environment (including the proper disposal of satellites, reliability standards, and effective collision avoidance).

(ii) Radio Frequency Spectrum and Interference Protection. Space traffic and RF spectrum use have traditionally been independently managed processes. Increased congestion in key orbital regimes creates a need for improved and increasingly dynamic methods to coordinate activities in both the physical and spectral domains, and may introduce new interdependencies. U.S. Government efforts in STM should address the following spectrum management considerations:

• Where appropriate, verify consistency between policy and existing national and international regulations and goals regarding global access to, and operation in, the RF spectrum for space services;

• Investigate the advantages of addressing spectrum in conjunction with the development of STM systems, standards, and best practices;

• Promote flexible spectrum use and investigate emerging technologies for potential use by space systems; and

• Ensure spectrum-dependent STM components, such as inter-satellite safety communications and active debris removal systems, can successfully access the required spectrum necessary to their missions.

(iii) Global Engagement. In its role as a major spacefaring nation, the United States should continue to develop and promote a range of norms of behavior, best practices, and standards for safe operations in space to minimize the space debris environment and promote data sharing and coordination of space activities. It is essential that other spacefaring nations also adopt best practices for the common good of all spacefaring states. The United States should encourage the adoption of new norms of behavior and best practices for space operations by the international community through bilateral and multilateral discussions with other spacefaring nations, and through U.S. participation in various organizations such as the Inter-Agency Space Debris Coordination Committee, International Standards Organization, Consultative Committee for Space Data Systems, and UN Committee on the Peaceful Uses of Outer Space.

SEC. 6. *Roles and Responsibilities.* In furtherance of the goals described in section 4 and the guidelines described in section 5 of this memorandum, agencies shall carry out the following roles and responsibilities:

(a) Advance SSA and STM S&T. Members of the National Space Council, or their delegees, shall coordinate, prioritize, and advocate for S&T, SSA, and STM, as appropriate, as it relates to their respective missions. They should seek opportunities to engage with the commercial sector and academia in pursuit of this goal.

(b) Mitigate the Effect of Orbital Debris on Space Activities.

(i) The Administrator of the National Aeronautics and Space Administration (NASA Administrator), in coordination with the Secretaries of State, Defense, Commerce, and Transportation, and the Director of National Intelligence, and in consultation with the Chairman of the Federal Communications Commission (FCC), shall lead efforts to update the U.S. Orbital Debris Mitigation Standard Practices and establish new guidelines for satellite design and operation, as appropriate and consistent with applicable law.

(ii) The Secretaries of Commerce and Transportation, in consultation with the Chairman of the FCC, will assess the suitability of incorporating these updated standards and best practices into their respective licensing processes, as appropriate and consistent with applicable law.

(c) Encourage and Facilitate U.S. Commercial Leadership in S&T, SSA, and STM. The Secretary of Commerce, in coordination with the Secretaries of Defense and Transportation, and the NASA Administrator, shall lead efforts to encourage and facilitate continued U.S. commercial leadership in SSA, STM, and related S&T.

(d) Provide U.S. Government-Derived Basic SSA Data and Basic STM Services to the Public.

(i) The Secretaries of Defense and Commerce, in coordination with the Secretaries of State and Transportation, the NASA Administrator, and the Director of National Intelligence, should cooperatively develop a plan for providing basic SSA data and basic STM services either directly or through a partnership with industry or academia, consistent with the guidelines of sections 5(a)(ii) and 5(b)(ii) of this memorandum.

(ii) The Secretary of Defense shall maintain the authoritative catalog of space objects.

(iii) The Secretaries of Defense and Commerce shall assess whether statutory and regulatory changes are necessary to effect the plan developed under subsection (d)(i) of this section, and shall pursue such changes, along with any other needed changes, as appropriate.

(e) Improve SSA Data Interoperability and Enable Greater SSA Data Sharing.

(i) The Secretary of Commerce, in coordination with the Secretaries of State, Defense, and Transportation, the NASA Administrator, and the Director of National Intelligence, shall develop standards and protocols for creation of an open architecture data repository to improve SSA data interoperability and enable greater SSA data sharing.

(ii) The Secretary of Commerce shall develop options, either in-house or through partnerships with industry or academia, assessing both the technical and economic feasibility of establishing such a repository.

(iii) The Secretary of Defense shall ensure that release of data regarding national security activities to any person or entity with access to the repository is consistent with national security interests.

(f) Develop Space Traffic Standards and Best Practices. The Secretaries of Defense, Commerce, and Transportation, in coordination with the Secretary of State, the NASA Administrator, and the Director of National Intelligence, and in consultation with the

Chairman of the FCC, shall develop space traffic standards and best practices, including technical guidelines, minimum safety standards, behavioral norms, and orbital conjunction prevention protocols related to prelaunch risk assessment and on-orbit collision avoidance support services.

(g) Prevent Unintentional Radio Frequency Interference. The Secretaries of Commerce and Transportation, in coordination with the Secretaries of State and Defense, the NASA Administrator, and the Director of National Intelligence, and in consultation with the Chairman of the FCC, shall coordinate to mitigate the risk of harmful interference and promptly address any harmful interference that may occur.

(h) Improve the U.S. Domestic Space Object Registry. The Secretary of State, in coordination with the Secretaries of Defense, Commerce, and Transportation, the NASA Administrator, and the Director of National Intelligence, and in consultation with the Chairman of the FCC, shall lead U.S. Government efforts on international engagement related to international transparency and space object registry on SSA and STM issues.

(i) Develop Policies and Regulations for Future U.S. Orbital Operations. The Secretaries of Defense, Commerce, and Transportation, in coordination with the Secretary of State, the NASA Administrator, and the Director of National Intelligence, shall regularly evaluate emerging trends in space missions to recommend revisions, as appropriate and necessary, to existing SSA and STM policies and regulations.

SEC. 7. *General Provisions*. (a) Nothing in this memorandum shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This memorandum shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(d) The Secretary of Commerce is authorized and directed to publish this memorandum in the Federal Register.

DONALD J. TRUMP.