

establish a rotorcraft and other runway-independent air vehicles initiative with the objective of developing and demonstrating improved safety, noise, and environmental impact in a relevant environment.

(c) **HYPERSONICS RESEARCH.**—The Administrator may establish a hypersonic research program with the objective of exploring the science and technology of hypersonic flight using air-breathing propulsion concepts, through a mix of theoretical work, basic and applied research, and development of flight research demonstration vehicles. The program may also include the transition to the hypersonic range of Mach 3 to Mach 5.

(d) **REVOLUTIONARY AERONAUTICAL CONCEPTS.**—The Administrator may establish a research program which covers a unique range of subsonic, fixed wing vehicles and propulsion concepts. This research is intended to push technology barriers beyond current subsonic technology. Propulsion concepts include advanced materials, morphing engines, hybrid engines, and fuel cells.

(e) **FUEL CELL-POWERED AIRCRAFT RESEARCH.**—

(1) **OBJECTIVE.**—The Administrator may establish a fuel cell-powered aircraft research program whose objective shall be to develop and test concepts to enable a hydrogen fuel cell-powered aircraft that would have no hydrocarbon or nitrogen oxide emissions into the environment.

(2) **APPROACH.**—The Administrator may establish a program of competitively awarded grants available to teams of researchers that may include the participation of individuals from universities, industry, and government for the conduct of this research.

(f) **MARS AIRCRAFT RESEARCH.**—

(1) **OBJECTIVE.**—The Administrator may establish a Mars Aircraft project whose objective shall be to develop and test concepts for an uncrewed aircraft that could operate for sustained periods in the atmosphere of Mars.

(2) **APPROACH.**—The Administrator may establish a program of competitively awarded grants available to teams of researchers that may include the participation of individuals from universities, industry, and government for the conduct of this research.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3379.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40112(a)	42 U.S.C. 16722(b).	Pub. L. 109–155, title IV, § 422(b)–(g), Dec. 30, 2005, 119 Stat. 2925.
40112(b)	42 U.S.C. 16722(c).	
40112(c)	42 U.S.C. 16722(d).	
40112(d)	42 U.S.C. 16722(e).	
40112(e)	42 U.S.C. 16722(f).	
40112(f)	42 U.S.C. 16722(g).	

NATIONAL AERO-SPACE PLANE PROGRAM

Pub. L. 101–611, title I, § 116, Nov. 16, 1990, 104 Stat. 3202, provided that:

“(a) **NATIONAL AERO-SPACE PLANE PROGRAM.**—The Secretary of Defense (hereafter in this section referred to as the ‘Secretary’) and the Administrator shall jointly pursue on a high priority basis a National Aero-Space Plane program whose objective shall be the development and demonstration, by 1997, of a primarily

air breathing single-stage-to-orbit and long range hypersonic cruise research flight vehicle. The program shall be a research program, and to the extent practicable technological information developed shall be transferred to the military and to the domestic civil aviation and other private industries.

“(b) **MANAGEMENT PLAN.**—

“(1) The Secretary and the Administrator [sic] shall jointly develop a management plan for the program established under subsection (a), which shall include goals, major tasks, anticipated schedules, organizational structure, funding profiles, details of the respective responsibilities of the Secretary and the Administrator, and resource procurement strategies.

“(2) The management plan developed pursuant to paragraph (1) shall be submitted to the Congress within 120 days after the date of enactment of this Act [Nov. 16, 1990].”

[Pub. L. 101–611, title I, § 127, Nov. 16, 1990, 104 Stat. 3205, provided that: “For purposes of this title [see Tables for classification], the term ‘Administrator’ means the Administrator of the National Aeronautics and Space Administration.”]

§ 40113. **Airspace systems research**

(a) **OBJECTIVE.**—The Airspace Systems Research program shall pursue research and development to enable revolutionary improvements to and modernization of the National Airspace System, as well as to enable the introduction of new systems for vehicles that can take advantage of an improved, modern air transportation system.

(b) **ALIGNMENT.**—Not later than 1 year after December 30, 2005, the Administrator shall align the projects of the Airspace Systems Research program so that they directly support the objectives of the Joint Planning and Development Office’s Next Generation Air Transportation System Integrated Plan.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3380.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40113	42 U.S.C. 16723.	Pub. L. 109–155, title IV, § 423, Dec. 30, 2005, 119 Stat. 2925.

In subsection (b), 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).

§ 40114. **Aviation safety and security research**

(a) **OBJECTIVE.**—The Aviation Safety and Security Research program shall pursue research and development activities that directly address the safety and security needs of the National Airspace System and the aircraft that fly in it. The program shall develop prevention, intervention, and mitigation technologies aimed at causal, contributory, or circumstantial factors of aviation accidents.

(b) **ALIGNMENT.**—Not later than 1 year after December 30, 2005, the Administrator shall align the projects of the Aviation Safety and Security Research program so that they directly support the objectives of the Joint Planning and Development Office’s Next Generation Air Transportation System Integrated Plan.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3380.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40114	42 U.S.C. 16724.	Pub. L. 109-155, title IV, § 424, Dec. 30, 2005, 119 Stat. 2926.

In subsection (b), 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).

§ 40115. Aviation weather research

The Administrator may carry out a program of collaborative research with the National Oceanic and Atmospheric Administration on convective weather events, with the goal of significantly improving the reliability of 2-hour to 6-hour aviation weather forecasts.

(Pub. L. 111-314, § 3, Dec. 18, 2010, 124 Stat. 3381.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40115	42 U.S.C. 16725.	Pub. L. 109-155, title IV, § 425, Dec. 30, 2005, 119 Stat. 2926.

§ 40116. University-based Centers for Research on Aviation Training

(a) IN GENERAL.—The Administrator shall award grants to institutions of higher education (or consortia thereof) to establish one or more Centers for Research on Aviation Training under cooperative agreements with appropriate Administration Centers.

(b) PURPOSE.—The purpose of the Centers for Research on Aviation Training shall be to investigate the impact of new technologies and procedures, particularly those related to the aircraft flight deck and to the air traffic management functions, on training requirements for pilots and air traffic controllers.

(c) APPLICATION.—An institution of higher education (or a consortium of such institutions) seeking funding under this section shall submit an application to the Administrator at such time, in such manner, and containing such information as the Administrator may require, including, at a minimum, a 5-year research plan.

(d) AWARD DURATION.—An award made by the Administrator under this section shall be for a period of 5 years and may be renewed on the basis of—

- (1) satisfactory performance in meeting the goals of the research plan proposed in the application submitted under subsection (c); and
- (2) other requirements as specified by the Administrator.

(Pub. L. 111-314, § 3, Dec. 18, 2010, 124 Stat. 3381.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40116	42 U.S.C. 16727.	Pub. L. 109-155, title IV, § 427, Dec. 30, 2005, 119 Stat. 2926; Pub. L. 110-422, title III, § 308, Oct. 15, 2008, 122 Stat. 4788.

In subsection (b), the words “Centers for Research on Aviation Training” are substituted for “Centers” for

clarity. There are references to both “Centers for Research on Aviation Training” and “Administration Centers” in subsection (a).

In subsection (d)(1), the words “proposed in the application submitted under subsection (c)” are substituted for “proposed by the Center in its application under subsection (c)” for clarity. Under section (c), applications are filed by an institution of higher education (or a consortium of such institutions) seeking funding, and not by the Center for which such funding is sought.

SUBCHAPTER III—SCHOLARSHIPS

§ 40131. Aeronautics scholarships

(a) ESTABLISHMENT.—The Administrator shall establish a program of scholarships for full-time graduate students who are United States citizens and are enrolled in, or have been accepted by and have indicated their intention to enroll in, accredited Masters degree programs in aeronautical engineering or equivalent programs at institutions of higher education. Each such scholarship shall cover the costs of room, board, tuition, and fees, and may be provided for a maximum of 2 years.

(b) IMPLEMENTATION.—Not later than 180 days after December 30, 2005, the Administrator shall publish regulations governing the scholarship program under this section.

(c) COOPERATIVE TRAINING OPPORTUNITIES.—Students who have been awarded a scholarship under this section shall have the opportunity for paid employment at one of the Administration Centers engaged in aeronautics research and development during the summer prior to the first year of the student’s Masters program, and between the first and second year, if applicable.

(Pub. L. 111-314, § 3, Dec. 18, 2010, 124 Stat. 3381.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40131	42 U.S.C. 16741.	Pub. L. 109-155, title IV, § 431, Dec. 30, 2005, 119 Stat. 2927.

In subsection (b), 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).

SUBCHAPTER IV—DATA REQUESTS

§ 40141. Aviation data requests

The Administrator shall make available upon request satellite imagery and aerial photography of remote terrain that the Administration owns at the time of the request to the Administrator of the Federal Aviation Administration or the Director of the Five Star Medallion Program, to assist and train pilots in navigating challenging topographical features of such terrain.

(Pub. L. 111-314, § 3, Dec. 18, 2010, 124 Stat. 3382.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
40141	42 U.S.C. 16751.	Pub. L. 109-155, title IV, § 441, Dec. 30, 2005, 119 Stat. 2927.