National Research Council's Earth Science Decadal Survey within the scope of the funds authorized for the Earth Science Mission Directorate.

(Pub. L. 111–267, title VII, § 704, Oct. 11, 2010, 124 Stat. 2831.)

§ 18374. Instrument test-beds and venture class missions

The Administrator shall pursue innovative ways to fly instrument-level payloads for early demonstration or as co-manifested payloads. The Congress encourages the use of the ISS as an accessible platform for the conduct of such activities. Additionally, in order to address the cost and schedule challenges associated with large flight systems, NASA should pursue smaller systems where practicable and warranted.

(Pub. L. 111–267, title VII, § 706, Oct. 11, 2010, 124 Stat. 2831.)

SUBCHAPTER VII—SPACE SCIENCE

§ 18381. Technology development

The Administrator shall ensure that the Science Mission Directorate maintains a long term technology development program for space and Earth science. This effort should be coordinated with an overall Agency technology investment approach, as authorized in section 905 of this Act.

(Pub. L. 111–267, title VIII, § 801, Oct. 11, 2010, 124 Stat. 2832.)

REFERENCES IN TEXT

Section 905 of this Act, referred to in text, is Pub. L. 111–267, title IX, § 905, Oct. 11, 2010, 124 Stat. 2836, which is not classified to the Code.

§ 18382. Suborbital research activities

(a) In general

The report of the National Academy of Sciences, Revitalizing NASA's Suborbital Program: Advancing Science, Driving Innovation and Developing Workforce, found that suborbital science missions were absolutely critical to building an aerospace workforce capable of meeting the needs of current and future human and robotic space exploration.

(b) Management

The Administrator shall designate an officer or employee of the Science Mission Directorate to act as the responsible official for all Suborbital Research in the Science Mission Directorate. The designee shall be responsible for the development of short- and long term strategic plans for maintaining, renewing and extending suborbital facilities and capabilities, monitoring progress towards goals in the plans, and be responsible for integration of suborbital activities and workforce development within the agency, thereby ensuring the long term recognition of their combined value to the directorate, to NASA, and to the Nation.

(c) Establishment of Suborbital Research Program

The Administrator shall establish a Suborbital Research Program within the Science Mission Directorate that shall include the use of sounding rockets, aircraft, high altitude balloons, suborbital reusable launch vehicles, and commercial launch vehicles to advance science and train the next generation of scientists and engineers in systems engineering and systems integration which are vital to maintaining critical skills in the aerospace workforce. The program shall integrate existing suborbital research programs with orbital missions at the discretion of the designated officer or employee and shall emphasize the participation of undergraduate and graduate students and post-doctoral researchers when formulating announcements of opportunity.

(d) Report

The Administrator shall report to the appropriate committees of Congress on the number and type of suborbital missions conducted in each fiscal year and the number of undergraduate and graduate students participating in the missions. The report shall be made annually for each fiscal year under this section.

(e) Authorization

There are authorized to be appropriated to the Administrator such sums as may be necessary to carry out this section.

(Pub. L. 111–267, title VIII, § 802, Oct. 11, 2010, 124 Stat. 2832.)

§ 18383. In-space servicing

The Administrator shall continue to take all necessary steps to ensure that provisions are made for in-space or human servicing and repair of all future observatory-class scientific spacecraft intended to be deployed in Earth-orbit or at a Lagrangian point to the extent practicable and appropriate. The Administrator should ensure that agency investments and future capabilities for space technology, robotics, and human space flight take the ability to service and repair these spacecraft into account, where appropriate, and incorporate such capabilities into design and operational plans.

(Pub. L. 111–267, title VIII, § 804, Oct. 11, 2010, 124 Stat. 2833.)

§ 18384. Decadal results

NASA shall take into account the current decadal surveys from the National Academies' Space Studies Board when submitting the President's budget request to the Congress.

(Pub. L. 111–267, title VIII, § 805, Oct. 11, 2010, 124 Stat. 2833.)

§ 18385. On-going restoration of radioisotope thermoelectric generator material production

(a) Findings

The Congress finds the following:

(1) The United States has led the world in the scientific exploration of space for nearly 50 years.

(2) Missions such as Viking, Voyager, Cassini, and New Horizons have greatly expanded knowledge of our solar system and planetary characteristics and evolution.

(3) Radioisotope power systems are the only available power sources for deep space missions making it possible to travel to such distant destinations as Mars, Jupiter, Saturn, Pluto, and beyond and maintain operational control and systems viability for extended mission durations.

(4) Current radioisotope power systems supplies and production will not fully support NASA missions planned even in the next decade and, without a new domestic production capability, the United States will no longer have the means to explore the majority of the solar system by the end of this decade.

(5) Continuing to rely on Russia or other foreign sources for radioisotope power system fuel production is not a secure option.

(6) Reestablishing domestic production will require a long lead-time. Thus, meeting future space exploration mission needs requires that a restart project begin at the earliest opportunity.

(b) In general

The Administrator shall, in coordination with the Secretary of Energy, pursue a joint approach beginning in fiscal year 2011 towards restarting and sustaining the domestic production of radioisotope thermoelectric generator material for deep space and other science and exploration missions. Funds authorized by this chapter for NASA shall be made available under a reimbursable agreement with the Department of Energy for the purpose of reestablishing facilities to produce fuel required for radioisotope thermoelectric generators to enable future missions.

(c) Report

Within 120 days after October 11, 2010, the Administrator and the Secretary of Energy shall submit a joint report to the appropriate committees of Congress on coordinated agreements, planned implementation, and anticipated schedule, production quantities, and mission applications under this section.

(Pub. L. 111–267, title VIII, § 806, Oct. 11, 2010, 124 Stat. 2833.)

§ 18386. Collaboration with ESMD and SOMD on robotic missions

The Administrator shall ensure that the Exploration Systems Mission Directorate and the Space Operations Mission Directorate coordinate with the Science Mission Directorate on an overall approach and plan for interagency and international collaboration on robotic missions that are NASA or internationally developed, including lunar, Lagrangian, near-Earth orbit, and Mars spacecraft, such as the International Lunar Network. Within 90 days after October 11, 2010, the Administrator shall provide a plan to the appropriate committees of Congress for implementation of the collaborative approach required by this section. The Administrator may not cancel or initiate any Exploration Systems Mission Directorate or Science Mission Directorate robotic project before the plan is submitted to the appropriate committees of Congress.

(Pub. L. 111–267, title VIII, § 807, Oct. 11, 2010, 124 Stat. 2834.)

§ 18387. Near-Earth object survey and policy with respect to threats posed

(a) Policy reaffirmation

Congress reaffirms the policy set forth in section 20102(g) of title 51 relating to surveying near-Earth asteroids and comets.

(b) Implementation

The Director of the OSTP shall implement, before September 30, 2012, 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 assign a Federal agency or agencies to be responsible for protecting the United States and working with the international community on such threats.

(Pub. L. 111–267, title VIII, § 808, Oct. 11, 2010, 124 Stat. 2834.)

CODIFICATION

In subsec. (a), ''section 20102(g) of title 51'' substituted for ''section 102(g) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2451(g))'' on authority of Pub. L. 111–314, § 5(e), Dec. 18, 2010, 124 Stat. 3443, which Act enacted Title 51, National and Commercial Space Programs.

§ 18388. Space weather

(a) Findings

The Congress finds the following:

(1) Space weather events pose a significant threat to modern technological systems.

(2) The effects of severe space weather events on the electric power grid, telecommunications and entertainment satellites, airline communications during polar routes, and space-based position, navigation and timing systems could have significant societal, economic, national security, and health impacts.

(3) Earth and Space Observing satellites, such as the Advanced Composition Explorer, Geostationary Operational Environmental Satellites, Polar Operational Environmental Satellites, and Defense Meteorological Satellites, provide crucial data necessary to predict space weather events.

(b) Action required

The Director of OSTP shall—

(1) improve the Nation's ability to prepare, avoid, mitigate, respond to, and recover from potentially devastating impacts of space weather events;

(2) coordinate the operational activities of the National Space Weather Program Council members, including the NOAA Space Weather Prediction Center and the U.S. Air Force Weather Agency; and

(3) submit a report to the appropriate committees of Congress within 180 days after October 11, 2010, that—

(A) details the current data sources, both space- and ground-based, that are necessary for space weather forecasting; and

(B) details the space- and ground-based systems that will be required to gather data necessary for space weather forecasting for the next 10 years.