

§ 60602. Integrated strategy

(a) IN GENERAL.—The Director of the Office of Science and Technology Policy, in collaboration with the interagency working group and upon the advice of the advisory group, shall develop a strategy for coordinated observation of space weather among members of the interagency working group (in this chapter, referred to as the “integrated strategy”). The integrated strategy shall identify—

(1) observations and measurements that must be sustained beyond the lifetime of current ground-based and space-based assets, as described under section 60603, that are essential for space weather research, models, forecasting, and prediction;

(2) new observations and measurements that may significantly improve space weather forecasting and prediction; and

(3) plans for follow-on space-based observations under section 60603.

(b) CONSIDERATIONS.—In developing the integrated strategy in subsection (a), the Director of the Office of Science and Technology Policy shall consider, as appropriate, the following:

(1) Potential contributions of commercial solutions, prize authority, academic and international partnerships, microsattellites, small satellite options, ground-based instruments, and hosted payloads for observations identified in section 60602(a)(2).

(2) Work conducted before the date of enactment of the PROSWIFT Act by the National Science and Technology Council with respect to space weather.

(3) The survey under section 60601(d).

(4) Any relevant recommendations from the most recent National Academies of Sciences, Engineering, and Medicine Decadal Survey for Solar and Space Physics (Heliophysics).

(c) REVIEW OF INTEGRATED STRATEGY.—

(1) REVIEW.—The Administrator of the National Aeronautics and Space Administration and the Administrator of the National Oceanic and Atmospheric Administration, in consultation with Federal agencies participating in the interagency working group, shall enter into an agreement with the National Academies of Sciences, Engineering, and Medicine to review the integrated strategy developed in this section.

(2) CONSIDERATIONS.—The review from paragraph (1) shall also consider the current state, capability, and feasibility of the commercial space weather sector to provide new and supplemental observations and measurements that may significantly improve space weather forecasting and prediction.

(3) TRANSMITTAL.—The Director of the Office of Science and Technology Policy, the Administrator of the National Aeronautics and Space Administration, and the Administrator of the National Oceanic and Atmospheric Administration shall transmit the integrated strategy and the results of the review required under paragraph (1) to the 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 1 year after the date of

the completion of the survey under section 60601(d)(3). The integrated strategy and its review shall be made publicly available within 30 days of submittal to Congress.

(d) IMPLEMENTATION PLAN.—Not later than 180 days after delivery of the review of the integrated strategy in subsection (c)(3), the interagency working group shall develop a plan to implement the integrated strategy, including an estimate of the cost and schedule required for implementation. Upon completion, the interagency working group shall submit the implementation plan to the Committees on Science, Space, and Technology and Armed Services of the House of Representatives and the Committees on Commerce, Science, and Transportation and Armed Services of the Senate. The implementation plan shall be made publicly available within 30 days of submittal to Congress.

(e) REEVALUATION.—The Director, in collaboration with the interagency working group, shall update the integrated strategy not later than 1 year after the reevaluation of the user survey from section 60601(d)(3)(F) in accordance with the requirements of subsections (a) through (d). (Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 886.)

Editorial Notes

REFERENCES IN TEXT

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

§ 60603. Sustaining and advancing critical space weather observations

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

(1) establish and sustain a baseline capability for space weather observations and to make such observations and data publicly available; and

(2) obtain enhanced space weather observations, as practicable, to advance forecasting and prediction capability, as informed by the integrated strategy in section 60602.

(b) SUSTAINING BASELINE SPACE-BASED OBSERVATIONAL CAPABILITIES.—

(1) The Administrator of the National Aeronautics and Space Administration shall, in cooperation with the European Space Agency and other international and interagency partners, maintain operations of the Solar and Heliospheric Observatory/Large Angle and Spectrometric Coronagraph (referred to in this section as “SOHO/LASCO”) for as long as the satellite continues to deliver quality observations.

(2) The Administrator of the National Aeronautics and Space Administration shall prioritize the reception of SOHO/LASCO data.

(3) The Administrator of the National Oceanic and Atmospheric Administration shall maintain, for as long as is practicable, operations of current space-based observational assets, including but not limited to the Geostationary Operational Environmental Satellites system, and the Deep Space Climate Observatory.

(c) BACKUP SPACE-BASED OBSERVATIONAL CAPABILITY.—The Administrator of the National Oce-

anic and Atmospheric Administration, in coordination with the Secretary of Defense and the Administrator of the National Aeronautics and Space Administration, shall work with Federal and international partners in order to secure reliable backup baseline capability for near real-time coronal mass ejection imagery, solar wind, solar imaging, coronal imagery, and other relevant observations required to provide space weather forecasts.

(d) SOHO/LASCO OPERATIONAL CONTINGENCY PLAN.—The Administrator of the National Oceanic and Atmospheric Administration shall develop an operational contingency plan to provide continuous space weather forecasting in the event of an unexpected SOHO/LASCO failure, and prior to the implementation of the backup space-based baseline observational capability in section 60603(c).

(e) BRIEFING.—Not later than 120 days after the date of enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration shall provide a briefing to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on the plan to secure reliable backup baseline capability described in subsection (c) and the SOHO/LASCO operational contingency plan developed under subsection (d).

(f) SUSTAINING GROUND-BASED OBSERVATIONAL CAPABILITY.—The Director of the National Science Foundation, the Director of the United States Geological Survey, the Secretary of the Air Force, and, as practicable in support of the Air Force, the Secretary of the Navy, shall each—

(1) maintain and improve ground-based observations of the Sun, as necessary and advisable, to help meet the needs identified in the survey under section 60601(d)(3); and

(2) continue to provide space weather data through ground-based facilities, including radars, lidars, magnetometers, neutron monitors, radio receivers, aurora and airglow imagers, spectrometers, interferometers, and solar observatories.

(g) CONSIDERATIONS.—In implementing subsections (b), (c), and (d), the Administrators of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration, the Directors of the National Science Foundation and United States Geological Survey, and the Secretaries of the Air Force and the Navy shall prioritize cost-effective and reliable solutions.

(h) GROUND-BASED OBSERVATIONAL DATA.—The Director of the National Science Foundation shall—

(1) make available to the public key data streams from the platforms and facilities described in subsection (d) for research and to support space weather model development;

(2) develop experimental models for scientific purposes; and

(3) support the transition of the experimental models to operations where appropriate.

(i) ENHANCED SPACE-BASED OBSERVATIONS.—The Administrator of the National Oceanic and

Atmospheric Administration, in coordination with the Secretary of Defense, should develop options to build and deploy space-based observational capabilities, beyond the baseline capabilities referenced in subsection (b), that may improve space weather measurements and observations. These supplemental observational capabilities could include commercial solutions, prize authority, academic partnerships, microsatellites, ground-based instruments, and opportunities to deploy the instrument or instruments as a secondary payload on an upcoming planned launch.

(Pub. L. 116–181, § 2(b), Oct. 21, 2020, 134 Stat. 888.)

Editorial Notes

REFERENCES IN TEXT

The date of enactment of the PROSWIFT Act, referred to in subsec. (e), is the date of enactment of Pub. L. 116–181, which was approved Oct. 21, 2020.

§ 60604. Research activities

(a) BASIC RESEARCH.—The Director of the National Science Foundation, the Administrator of the National Aeronautics and Space Administration, and the Secretary of Defense, shall—

(1) continue to carry out basic research on heliophysics, geospace science, and space weather; and

(2) support competitive, peer-reviewed proposals for conducting research, advancing modeling, and monitoring of space weather and its impacts, including the science goals outlined in decadal surveys in solar and space physics conducted by the National Academies of Sciences, Engineering, and Medicine.

(b) MULTIDISCIPLINARY RESEARCH.—

(1) FINDINGS.—Congress finds that the multidisciplinary nature of solar and space physics creates funding challenges that require coordination across scientific disciplines and Federal agencies.

(2) SENSE OF CONGRESS.—It is the sense of Congress that science centers could coordinate multidisciplinary solar and space physics research. The Administrator of the National Aeronautics and Space Administration and Director of the National Science Foundation should support competitively awarded grants for multidisciplinary science centers that advance solar and space physics research, including research-to-operations and operations-to-research processes.

(3) MULTIDISCIPLINARY RESEARCH.—The Director of the National Science Foundation, the Administrator of the National Oceanic and Atmospheric Administration, and the Administrator of the National Aeronautics and Space Administration, shall each pursue multidisciplinary research in subjects that further the understanding of solar physics, space physics, and space weather.

(c) SCIENCE MISSIONS.—The Administrator of the National Aeronautics and Space Administration should implement missions that meet the science objectives identified in solar and space physics decadal surveys conducted by the National Academies of Sciences, Engineering, and Medicine.