

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.

(d) RESEARCH TO OPERATIONS; OPERATIONS TO RESEARCH.—The interagency working group shall, upon consideration of the advice of the advisory group, develop formal mechanisms to—

(1) transition the space weather research findings, models, and capabilities of the National Aeronautics and Space Administration, the National Science Foundation, the United States Geological Survey, and other relevant Federal agencies, as appropriate, to the National Oceanic and Atmospheric Administration and the Department of Defense;

(2) enhance coordination between research modeling centers and forecasting centers; and

(3) communicate the operational needs of space weather forecasters of the National Oceanic and Atmospheric Administration and Department of Defense, as appropriate, to the National Aeronautics and Space Administration, the National Science Foundation, and the United States Geological Survey.

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 889.)

§ 60605. Space weather data

(a) IN GENERAL.—The Administrator of the National Aeronautics and Space Administration and the Director of the National Science Foundation shall continue to—

(1) make space weather-related data obtained for scientific research purposes available to space weather forecasters and operations centers; and

(2) support model development and model applications to space weather forecasting.

(b) RESEARCH.—The Administrator of the National Oceanic and Atmospheric Administration shall make space weather-related data obtained from operational forecasting available for research.

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 890.)

§ 60606. Space weather knowledge transfer and information exchange

Not later than 180 days after the date of enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration, in collaboration with the Administrator of the National Aeronautics and Space Administration and the Director of the National Science Foundation, shall enter into an arrangement with the National Academies of Sciences, Engineering, and Medicine to establish a Space Weather Government-Academic-Commercial Roundtable to facilitate communication and knowledge transfer among Government participants in the space weather interagency working group established under section 60601(c), the academic community, and the commercial space weather sector to—

(1) facilitate advances in space weather prediction and forecasting;

(2) increase coordination of space weather research to operations and operations to research; and

(3) improve preparedness for potential space weather phenomena.

(Pub. L. 116–181, §2(b), Oct. 21, 2020, 134 Stat. 891.)

Editorial Notes

REFERENCES IN TEXT

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

§ 60607. Pilot program for obtaining commercial sector space weather data

(a) ESTABLISHMENT.—Not later than 12 months after the date of enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration may establish a pilot program under which the Administrator will offer to enter into contracts with one or more entities in the commercial space weather sector for the provision to the Administrator of space weather data generated by such an entity that meets the standards and specifications published under subsection (b).

(b) DATA STANDARD AND SPECIFICATIONS.—Not later than 18 months after the date of enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration, in consultation with the Secretary of Defense, may publish standards and specifications for ground-based, ocean-based, air-based, and space-based commercial space weather data and metadata.

(c) CONTRACTS.—

(1) IN GENERAL.—Within 12 months after the date of transmission of the review of the integrated strategy to Congress under section 60602(c)(3) and taking into account the results of the review, the Administrator of the National Oceanic and Atmospheric Administration may offer to enter, through an open competition, into at least one contract with one or more commercial space weather sector entities capable of providing space weather data that—

(A) meets the standards and specifications established for providing such data under subsection (b); and

(B) is provided in a manner that allows the Administrator of the National Oceanic and Atmospheric Administration to calibrate and evaluate the data for use in space weather research and forecasting models of the National Oceanic and Atmospheric Administration, the Department of Defense, or both.

(2) ASSESSMENT.—If one or more contract is entered into under paragraph (1), not later than 4 years after the date of enactment of the PROSWIFT Act, the Administrator of the National Oceanic and Atmospheric Administration shall assess, and submit 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, a report on the extent to which the pilot program has demonstrated data provided under contracts described in paragraph (1) meet the standards and specifications established under subsection (b) and the extent to which the pilot program has demonstrated—

(A) the viability of assimilating the commercially provided data into National Oceanic and Atmospheric Administration space weather research and forecasting models;