

116TH CONGRESS  
1ST SESSION

# H. R. 5260

To improve understanding and forecasting of space weather, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

NOVEMBER 22, 2019

Mr. PERLMUTTER (for himself, Mr. BROOKS of Alabama, and Ms. JOHNSON of Texas) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committees on Armed Services, and Natural Resources, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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## A BILL

To improve understanding and forecasting of space weather, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Promoting Research  
5 and Observations of Space Weather to Improve the Fore-  
6 casting of Tomorrow Act” or the “PROSWIFT Act”.

1 **SEC. 2. SPACE WEATHER.**

2 (a) POLICY.—It shall be the policy of the United  
 3 States to prepare and protect against the social and eco-  
 4 nomic impacts of space weather phenomena by supporting  
 5 actions to improve space weather forecasts and predictions  
 6 including: sustaining and enhancing critical observations,  
 7 identifying research needs and promoting opportunities for  
 8 research to operations and operations to research collabo-  
 9 rations both within and outside of the Federal Govern-  
 10 ment, advancing space weather models, engaging with all  
 11 sectors of the space weather community including aca-  
 12 demia and the commercial sector, and understanding the  
 13 needs of space weather end users.

14 (b) AMENDMENT TO TITLE 51, UNITED STATES  
 15 CODE.—Subtitle VI of title 51, United States Code, is  
 16 amended by adding after chapter 605 the following:

17 **“CHAPTER 606—SPACE WEATHER**

“60601. Space weather.

“60602. Integrated strategy.

“60603. Sustaining and advancing critical space weather observations.

“60604. Research activities.

“60605. Space weather data.

“60606. Space weather knowledge transfer and information exchange.

“60607. Space weather benchmarks.

18 **“§ 60601. Space weather**

19 “(a) FINDINGS.—

20 “(1) SPACE WEATHER.—Congress makes the  
 21 following findings with respect to space weather:

1           “(A) Space weather phenomena pose a sig-  
2           nificant threat to ground-based and space-based  
3           critical infrastructure, modern technological  
4           systems, and humans working in space.

5           “(B) The effects of severe space weather  
6           on the electric power grid, satellites and sat-  
7           ellite communications and information, aviation  
8           operations, astronauts living and working in  
9           space, and space-based position, navigation, and  
10          timing systems could have significant societal,  
11          economic, national security, and health impacts.

12          “(C) Space-based and ground-based obser-  
13          vations provide crucial data necessary to under-  
14          stand, forecast, and prepare for space weather  
15          events.

16          “(D) Clear roles and accountability of Fed-  
17          eral departments and agencies are critical for  
18          efficient and effective response to threats posed  
19          by space weather.

20          “(E) Space weather observation and fore-  
21          casting are essential for the success of human  
22          and robotic space exploration.

23          “(F) In October 2015, the National  
24          Science and Technology Council published a  
25          National Space Weather Strategy and a Na-

1           tional Space Weather Action Plan seeking to in-  
2           tegrate national space weather efforts and add  
3           new capabilities to meet increasing demand for  
4           space weather information.

5           “(G) In March 2019, the National Science  
6           and Technology Council published an updated  
7           National Space Weather Strategy and Action  
8           Plan to enhance the preparedness and resilience  
9           of the United States to space weather.

10          “(2) ROLE OF FEDERAL AGENCIES.—Congress  
11          makes the following findings with respect to the role  
12          of Federal agencies on space weather:

13                 “(A) The National Oceanic and Atmos-  
14                 pheric Administration provides operational  
15                 space weather monitoring and forecasting for  
16                 civil applications, maintains ground-based and  
17                 space-based assets to provide observations need-  
18                 ed for space weather forecasting, prediction,  
19                 and warnings, provides research to support  
20                 operational responsibilities, and develops re-  
21                 quirements for space weather forecasting tech-  
22                 nologies and science.

23                 “(B) The Department of Defense provides  
24                 operational space weather research, monitoring,

1 and forecasting for the department’s unique  
2 missions and applications.

3 “(C) The National Aeronautics and Space  
4 Administration provides increased under-  
5 standing of the fundamental physics of the  
6 Sun-Earth system through basic research,  
7 space-based observations and modeling, devel-  
8 oping new space-based technologies and mis-  
9 sions, and monitoring of space weather for the  
10 National Aeronautics and Space Administra-  
11 tion’s space missions.

12 “(D) The National Science Foundation  
13 provides increased understanding of the Sun-  
14 Earth system through ground-based measure-  
15 ments, technologies, and modeling.

16 “(E) The Department of the Interior col-  
17 lects, distributes, and archives operational  
18 ground-based magnetometer data in the United  
19 States and its territories, works with the inter-  
20 national community to improve global geo-  
21 physical monitoring, and develops crustal con-  
22 ductivity models to assess and mitigate risks  
23 from space weather induced electric ground cur-  
24 rents.

1           “(F) The Federal Aviation Administration  
2           provides operational requirements for space  
3           weather services in support of aviation and for  
4           coordination of these requirements with the  
5           International Civil Aviation Organization, and  
6           integrates space weather data and products into  
7           the Next Generation Air Transportation Sys-  
8           tem.

9           “(b) SPACE WEATHER DISTURBANCE DEFINED.—In  
10          this chapter, the term ‘space weather disturbance’ includes  
11          geo-electric fields, ionizing radiation, ionospheric disturb-  
12          ances, solar radio bursts, and upper atmosphere expan-  
13          sion.

14          “(c) COORDINATION BY OFFICE OF SCIENCE AND  
15          TECHNOLOGY POLICY.—The Director of the Office of  
16          Science and Technology Policy shall—

17                 “(1) coordinate the development and implemen-  
18                 tation of Federal Government activities conducted  
19                 with respect to space weather to improve the ability  
20                 of the United States to prepare for, avoid, mitigate,  
21                 respond to, and recover from potentially devastating  
22                 impacts of space weather; and

23                 “(2) coordinate the activities of the interagency  
24                 working group on space weather established under  
25                 subsection (d).

1       “(d) SPACE WEATHER INTERAGENCY WORKING  
2 GROUP.—The National Science and Technology Council  
3 shall establish an interagency working group on space  
4 weather (referred to in this section as the ‘interagency  
5 working group’) to lead executive branch actions that im-  
6 prove the understanding of and preparation for space  
7 weather phenomena, and coordination of Federal space  
8 weather activities.

9               “(1) MEMBERSHIP.—The following entities  
10 shall be members of the interagency working group:

11                       “(A) The National Oceanic and Atmos-  
12 pheric Administration.

13                       “(B) The National Aeronautics and Space  
14 Administration.

15                       “(C) The National Science Foundation.

16                       “(D) The Department of Defense.

17                       “(E) The Department of the Interior.

18                       “(F) Such other Federal Agencies as the  
19 Director of the Office of Science and Tech-  
20 nology Policy deems appropriate.

21               “(2) INTERAGENCY AGREEMENTS.—The mem-  
22 bers of the interagency working group may enter  
23 into one or more interagency agreements providing  
24 for cooperation and collaboration in the development  
25 of space weather spacecraft, instruments, tech-

1 nologies, and research to operations and operations  
2 to research in accordance with this chapter.

3 “(3) INTERNATIONAL, ACADEMIC COMMUNITY,  
4 AND COMMERCIAL SECTOR COLLABORATION.—Each  
5 Federal agency participating in the space weather  
6 interagency working group established under this  
7 subsection shall, to the extent practicable, increase  
8 engagement and cooperation with the international  
9 community, academic community, and commercial  
10 space weather sector on the observational infrastruc-  
11 ture, data, and scientific research necessary to ad-  
12 vance the monitoring, forecasting and prediction of  
13 and preparation and protection from space weather  
14 phenomena.

15 “(e) SPACE WEATHER ADVISORY GROUP.—

16 “(1) ESTABLISHMENT.—Not later than 6  
17 months after the date of the enactment of this Act,  
18 the Administrator of the National Oceanic and At-  
19 mospheric Administration, in consultation with other  
20 relevant Federal agencies, shall establish a space  
21 weather advisory group (in this chapter referred to  
22 as the ‘advisory group’) for the purposes of receiving  
23 advice from the academic community, the commer-  
24 cial space weather sector, and space weather end



1 users that informs the interests and work of the  
2 interagency working group.

3 “(A) COMPOSITION.—The advisory group  
4 shall be composed of not more than 15 mem-  
5 bers appointed by the interagency working  
6 group, of whom—

7 “(i) 5 members shall be representa-  
8 tives of the academic community;

9 “(ii) 5 members shall be representa-  
10 tives of the commercial space weather sec-  
11 tor; and

12 “(iii) 5 members shall be nongovern-  
13 mental representatives of the space weath-  
14 er end user community.

15 “(B) CHAIR.—Not later than 30 days after  
16 the date on which the last member of the advi-  
17 sory group is appointed under paragraph (2),  
18 the Administrator of the National Oceanic and  
19 Atmospheric Administration shall appoint 1  
20 member as the Chair of the advisory group.

21 “(C) TERMS.—The length of the term of  
22 each member of the advisory group shall be 3  
23 years beginning on the date on which the mem-  
24 ber is appointed.

25 “(D) TERM LIMITS.—

1           “(i) IN GENERAL.—A member of the  
2           advisory group may not serve on the advi-  
3           sory group for more than 2 consecutive  
4           terms.

5           “(ii) CHAIR.—A member of the advi-  
6           sory group may not serve as the Chair of  
7           the advisory group for more than 2 terms,  
8           regardless of whether the terms are con-  
9           secutive.

10          “(2) DUTIES.—The advisory group shall advise  
11          the interagency working group on the following:

12               “(A) Facilitating advances in the space  
13               weather enterprise of the United States.

14               “(B) Improving the ability of the United  
15               States to prepare for, mitigate, respond to, and  
16               recover from space weather events.

17               “(C) Enabling the coordination and facili-  
18               tation of research-to-operations and operations-  
19               to-research, as described in section 60604(d).

20               “(D) Developing and implementing the in-  
21               tegrated strategy under section 60602 including  
22               subsequent updates and reevaluations.

23          “(3) USER SURVEY.—

24               “(A) IN GENERAL.—Not later than 6  
25               months after the establishment of the advisory

1 group, the advisory group shall conduct a com-  
2 prehensive survey of the needs of users of space  
3 weather products to identify the space weather  
4 research, observations, forecasting, prediction,  
5 and modeling advances required to improve  
6 space weather products.

7 “(B) SURVEY CONSIDERATIONS.—The sur-  
8 vey conducted under subparagraph (A) shall—

9 “(i) assess the adequacy of current  
10 Federal Government goals for lead time,  
11 accuracy, coverage, timeliness, data rate,  
12 and data quality for space weather obser-  
13 vations and forecasting;

14 “(ii) identify options and methods to,  
15 in consultation with the academic commu-  
16 nity and the commercial space weather sec-  
17 tor, improve upon the advancement of the  
18 goals described in clause (i);

19 “(iii) identify opportunities for collec-  
20 tion of new data to address the needs of  
21 the space weather user community;

22 “(iv) identify methods to increase co-  
23 ordination of space weather research-to-op-  
24 erations and operations-to-research;

1           “(v) identify opportunities for new  
2           technologies, research, and instrumentation  
3           to aid in research, understanding, moni-  
4           toring, modeling, prediction, forecasting,  
5           and warning of space weather; and

6           “(vi) identify methods and tech-  
7           nologies to improve preparedness for po-  
8           tential space weather phenomena.

9           “(C) COORDINATION WITH AGENCIES.—In  
10          carrying out the requirements of this sub-  
11          section, the advisory group shall communicate  
12          and coordinate with the interagency working  
13          group to ensure the needs of the governmental  
14          space weather user community are adequately  
15          and appropriately identified by the survey under  
16          subparagraph (A).

17          “(D) BRIEFING TO CONGRESS.—Not later  
18          than 1 year after the date of enactment of this  
19          Act, the advisory group shall provide to the  
20          Committee on Science, Space, and Technology  
21          of the House of Representatives and the Com-  
22          mittee on Commerce, Science, and Transpor-  
23          tation of the Senate a briefing on the survey re-  
24          sults.

1           “(E) PUBLICATION.—Within 30 days of  
2           the briefing to Congress, the advisory group  
3           shall make the results of the comprehensive  
4           survey conducted under subparagraph (A) pub-  
5           licly available.

6           “(F) REEVALUATION.—The advisory group  
7           shall review and assess the comprehensive sur-  
8           vey not less than every 3 years and update, re-  
9           submit, and republish the survey in accordance  
10          with the requirements of subparagraph (D) and  
11          (E).

12          “(4) FEDERAL ADVISORY COMMITTEE ACT.—  
13          Section 14 of the Federal Advisory Committee Act  
14          (5 U.S.C. App.) shall not apply to the advisory  
15          group.

16          **“§ 60602. Integrated strategy**

17          “(a) IN GENERAL.—The Director of the Office of  
18          Science and Technology Policy, in collaboration with the  
19          interagency working group and upon the advice of the ad-  
20          visory group, shall develop a strategy for coordinated ob-  
21          servations of space weather among members of the inter-  
22          agency working group (in this chapter, referred to as the  
23          ‘integrated strategy’). The integrated strategy shall iden-  
24          tify—

1           “(1) observations and measurements that must  
2           be sustained beyond the lifetime of current ground-  
3           based and space-based assets, as described in section  
4           60603 of this Act that are essential for space weath-  
5           er research, models, forecasting, and prediction;

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

9           “(3) plans for follow-on space-based observa-  
10          tions under section 60603(g).

11          “(b) CONSIDERATIONS.—In developing the integrated  
12          strategy in subsection (a), the Director of the Office of  
13          Science and Technology Policy shall consider, as appro-  
14          priate the following:

15                 “(1) Potential contributions of commercial solu-  
16                 tions, prize authority, academic and international  
17                 partnerships, microsattellites, small satellite options,  
18                 ground-based instruments, and hosted payloads for  
19                 observations identified in section 60602(a)(2).

20                 “(2) Work conducted before the date of the en-  
21                 actment of this Act by the National Science and  
22                 Technology Council with respect to space weather.

23                 “(3) The user survey from section 60601(e).

1           “(4) Any relevant recommendations from the  
2 most recent National Research Council’s Decadal  
3 Strategy for Solar and Space Physics (Heliophysics).

4           “(c) REVIEW OF INTEGRATED STRATEGY.—

5           “(1) REVIEW.—The Administrator of the Na-  
6 tional Aeronautics and Space Administration and  
7 the Administrator of the National Oceanic and At-  
8 mospheric Administration, in consultation with Fed-  
9 eral agencies participating in the interagency work-  
10 ing group, shall enter into an agreement with the  
11 National Academies of Sciences, Engineering, and  
12 Medicine to review the integrated strategy developed  
13 in this section.

14           “(2) CONSIDERATIONS.—The review from para-  
15 graph (1) shall also consider the current state, capa-  
16 bility, and feasibility of the commercial space weath-  
17 er sector to provide new and supplemental observa-  
18 tions and measurements that may significantly im-  
19 prove space weather forecasting and prediction.

20           “(3) TRANSMITTAL.—The Director of the Of-  
21 fice of Science and Technology Policy and the Ad-  
22 ministrator of the National Aeronautics and Space  
23 Administration and the Administrator of the Na-  
24 tional Oceanic and Atmospheric Administration shall  
25 transmit the Integrated Strategy and the results of

1 the review required under paragraph (1) to the Com-  
2 mittee on Science, Space, and Technology in the  
3 House of Representatives and the Committee on  
4 Commerce, Science, and Transportation of the Sen-  
5 ate not later than 18 months from the enactment of  
6 this Act. The Integrated Strategy and its review  
7 shall be made publicly available within 30 days of  
8 submittal to Congress.

9 “(d) IMPLEMENTATION PLAN.—Not later than 6  
10 months after delivery of the review of the Integrated  
11 Strategy in subsection (c), the interagency working group  
12 shall develop a plan to implement the Integrated Strategy,  
13 including an estimate of the cost and schedule required  
14 for implementation.

15 “(e) REEVALUATION.—The Director, in collaboration  
16 with the interagency working group, shall update the inte-  
17 grated strategy not later than six months after the re-  
18 evaluation of the user survey from section 60601(e)(2)(E)  
19 in accordance with the requirements of subsections (a)  
20 through (d).

21 **“§ 60603. Sustaining and advancing critical space**  
22 **weather observations**

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



1           “(1) establish and sustain a baseline capability  
2 for space weather observations and to make such ob-  
3 servations and data publicly available; and

4           “(2) obtain enhanced space weather observa-  
5 tions, as practicable, to advance forecasting and pre-  
6 diction capability, as informed by the Integrated  
7 Strategy in section 60602.

8           “(b) SUSTAINING BASELINE SPACE-BASED OBSER-  
9 VATIONAL CAPABILITIES.—

10           “(1) The Administrator of the National Aero-  
11 nautics and Space Administration shall, in coopera-  
12 tion with the European Space Agency and other  
13 international and interagency partners, maintain op-  
14 erations of the Solar and Heliospheric Observatory/  
15 Large Angle and Spectrometric Coronagraph (re-  
16 ferred to in this section as ‘SOHO/LASCO’) for as  
17 long as the satellite continues to deliver quality ob-  
18 servations.

19           “(2) The Administrator of the National Aero-  
20 nautics and Space Administration shall prioritize the  
21 reception of SOHO/LASCO data.

22           “(3) The Administrator of the National Oceanic  
23 and Atmospheric Administration shall maintain cur-  
24 rent space-based observational assets including but  
25 not limited to the Geostationary Operational Envi-

1       ronmental Satellites (referred to in this section as  
2       ‘GOES’) system, and the Deep Space Climate Ob-  
3       servatory (referred to in this section as ‘DSCOVR’).

4       “(c) BACK-UP SPACE-BASED OBSERVATIONAL CAPA-  
5       BILITY.—The Administrators of the National Oceanic and  
6       Atmospheric Administration and the National Aeronautics  
7       and Space Administration, in coordination with the Sec-  
8       retary of Defense, shall work with Federal and inter-  
9       national partners in order to secure reliable backup capa-  
10      bility for near real-time coronal mass ejection imagery,  
11      solar wind, solar imaging, coronal imagery, and other rel-  
12      evant observations required to provide space weather fore-  
13      casts.

14      “(d) SUSTAINING GROUND-BASED OBSERVATIONAL  
15      CAPABILITY.—The Director of the National Science  
16      Foundation, the Director of the United States Geological  
17      Survey, the Secretary of the Air Force, and, where prac-  
18      ticable in support of the Air Force, the Secretary of the  
19      Navy shall each—

20              “(1) maintain and improve ground-based obser-  
21      vations of the Sun to help meet the needs identified  
22      in the User Survey from section 60601(e)(3); and

23              “(2) continue to provide space weather data  
24      through ground-based facilities, including radars,  
25      lidars, magnetometers, radio receivers, aurora and

1       airglow imagers, spectrometers, interferometers, and  
2       solar observatories.

3       “(e) CONSIDERATIONS.—In implementing sub-  
4       sections (b), (c), and (d), the Administrators of the Na-  
5       tional Aeronautics and Space Administration and the Na-  
6       tional Oceanic and Atmospheric Administration, the Di-  
7       rectors of the National Science Foundation and United  
8       States Geological Survey, and the Secretaries of the Air  
9       Force and the Navy shall prioritize cost-effective and reli-  
10      able solutions.

11      “(f) GROUND-BASED OBSERVATIONAL DATA.—The  
12      Director of the National Science Foundation shall—

13           “(1) make available to the public key data  
14           streams from the platforms facilities described in  
15           subsection (e) for research and to the support of  
16           space weather model development;

17           “(2) develop experimental models for scientific  
18           purposes; and

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

21      “(g) ENHANCED SPACE-BASED OBSERVATIONS.—  
22      The Administrator of the National Oceanic and Atmos-  
23      pheric Administration, in coordination with the Secretary  
24      of Defense, should develop options to build and deploy  
25      space-based observational capabilities that may improve

1 space weather measurements and observations. These sup-  
2 plemental observational capabilities could include commer-  
3 cial solutions, prize authority, academic partnerships,  
4 microsattellites, ground-based instruments, and opportuni-  
5 ties to deploy the instrument or instruments as a sec-  
6 ondary payload on an upcoming planned launch.

7 **“§ 60604. Research activities**

8 “(a) BASIC RESEARCH.—The Director of the Na-  
9 tional Science Foundation, the Administrator of the Na-  
10 tional Aeronautics and Space Administration, and the Sec-  
11 retary of Defense, shall—

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

15 “(2) support competitive, peer-reviewed pro-  
16 posals for conducting research, advancing modeling,  
17 and monitoring of space weather and its impacts, in-  
18 cluding the science goals outlined in decadal surveys  
19 in solar and space physics conducted by the National  
20 Academies of Sciences, Engineering, and Medicine.

21 “(b) MULTIDISCIPLINARY RESEARCH.—

22 “(1) FINDINGS.—Congress finds that the multi-  
23 disciplinary nature of solar and space physics creates  
24 funding challenges that require coordination across  
25 scientific disciplines and Federal agencies.

1           “(2) SENSE OF CONGRESS.—It is the sense of  
2           Congress that science centers could coordinate mul-  
3           tidisciplinary solar and space physics research. The  
4           Administrator of the National Aeronautics and  
5           Space Administration and Director of the National  
6           Science Foundation should support competitively  
7           awarded grants for multidisciplinary science centers  
8           that advance solar and space physics research in-  
9           cluding research to operations and operations to re-  
10          search processes.

11          “(3) MULTIDISCIPLINARY RESEARCH.—The Di-  
12          rector of the National Science Foundation, the Ad-  
13          ministrator of the National Oceanic and Atmos-  
14          pheric Administration, and the Administrator of the  
15          National Aeronautics and Space Administration,  
16          shall each pursue multidisciplinary research in sub-  
17          jects that further the understanding of solar physics,  
18          space physics, and space weather.

19          “(c) SCIENCE MISSIONS.—The Administrator of the  
20          National Aeronautics and Space Administration should  
21          implement missions that meet the science objectives identi-  
22          fied in solar and space physics decadal surveys conducted  
23          by the National Academies of Sciences, Engineering, and  
24          Medicine.

1       “(d) RESEARCH TO-OPERATIONS; OPERATIONS TO-  
2 RESEARCH.—

3               “(1) IN GENERAL.—The interagency working  
4 group shall, upon consideration of the advice of the  
5 advisory group, develop formal mechanisms to—

6               “(A) transition National Aeronautics and  
7 Space Administration, National Science Foun-  
8 dation, United States Geological Survey, and  
9 other relevant Federal agencies space weather  
10 research findings, models, and capabilities, as  
11 appropriate, to the National Oceanic and At-  
12 mospheric Administration and the Department  
13 of Defense;

14               “(B) enhance coordination between re-  
15 search modeling centers and forecasting cen-  
16 ters; and

17               “(C) communicate National Oceanic and  
18 Atmospheric Administration and Department of  
19 Defense operational needs of space weather  
20 forecasters, as appropriate, to the National Aer-  
21 onautics and Space Administration, the Na-  
22 tional Science Foundation and United States  
23 Geological Survey.

1 **“§ 60605. Space weather data**

2 “(a) IN GENERAL.—The Administrator of the Na-  
3 tional Aeronautics and Space Administration and the Di-  
4 rector of the National Science Foundation shall continue  
5 to—

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

9 “(2) support model development and model ap-  
10 plications to space weather forecasting.

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

15 **“§ 60606. Space weather knowledge transfer and in-  
16 formation exchange**

17 “The Administrator of the National Oceanic and At-  
18 mospheric Administration, in collaboration with the Ad-  
19 ministrator of the National Aeronautics and Space Admin-  
20 istration and the Director of the National Science Founda-  
21 tion, shall enter into an arrangement with the National  
22 Academies of Sciences, Engineering, and Medicine to es-  
23 tablish a Space Weather Government-Academic-Commer-  
24 cial Roundtable to facilitate communication and knowl-  
25 edge transfer among Government participants in the space  
26 weather interagency working group established under sec-

1 tion 60601(d), the academic community, and the commer-  
2 cial space weather sector to—

3 “(1) facilitate advances in space weather pre-  
4 diction and forecasting;

5 “(2) increase coordination of space weather re-  
6 search-to-operations and operations-to-research; and

7 “(3) improve preparedness for potential space  
8 weather events.

9 **“§ 60607. Space weather benchmarks**

10 “(a) IN GENERAL.—The space weather interagency  
11 working group established under section 60601(d) shall  
12 periodically review and update the benchmarks described  
13 in the report of the National Science and Technology  
14 Council entitled, ‘Space Weather Phase 1 Benchmarks’  
15 and dated June 2018, as necessary, based on—

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

18 “(2) the evolving needs of entities impacted by  
19 space weather disturbances.

20 “(b) TECHNICAL AND CONFORMING AMENDMENT.—  
21 Section 809 of the National Aeronautics and Space Ad-  
22 ministration Authorization Act of 2010 (42 U.S.C. 18388)  
23 and the item relating to that section in the table of con-  
24 tents under section 1(b) of that Act (124 Stat. 2806) are  
25 repealed.”.



- 1       (c) TECHNICAL AND CONFORMING AMENDMENT.—
- 2 The table of chapters of title 51, United States Code, is
- 3 amended by adding after the item relating to chapter 605
- 4 the following:

“606. Space Weather”.

