



ADVANCING EARTH  
AND SPACE SCIENCE

7 May 2019

The Honorable Gary Peters  
724 Hart Senate Office Building  
Washington, D.C. 20510

The Honorable Cory Gardner  
354 Russell Senate Office Building  
Washington, D.C. 20510

Dear Senators Peters and Gardner:

On behalf of the American Geophysical Union (AGU) and its 60,000 members, I am writing to endorse the Space Weather Research and Forecasting Act (S.881) and to thank you for crafting this important legislation.

Space weather has the potential to inflict trillions of dollars of damage on our economy, weaken our national security, and alter our way of life. The National Research Council estimates that a severe space weather event has the potential to inflict \$1-2 trillion dollars of economic and societal damage in the first year alone and impact more than 130 million people. To recover from such an event could take from 4-10 years.<sup>1</sup> Moreover, space weather fluctuations are not limited to rare catastrophic events but regularly impact our society and economy. It's estimated that the average economic impact of moderate geomagnetic events on the electric power grid in the U.S. is \$7 to \$10 billion per year.<sup>2</sup>

Given the economic and opportunity costs associated with space weather, we support the bill's approach of creating a national, coordinated plan to advance our understanding of the relationship between the sun and Earth and to ensure the development of new technologies and forecasting capabilities to mitigate the threat posed by space weather. We appreciate the bill's recognition that a partnership between industry, academia, and federal agencies is needed to further our understanding and capacity to address the impacts of space weather. As a community dedicated to advancing the understanding of Earth and space science, we applaud the bill's intent to further scientifically-informed action towards disaster preparation, mitigation, response, and recovery.

AGU looks forward to working with you as this legislation advances.

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<sup>1</sup> National Research Council (2008) *Severe Space Weather Events: Understanding Societal and Economic Impacts: A Workshop Report*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/12507>.

<sup>2</sup> Schrijver, C. J. (2015), Socio-Economic Hazards and Impacts of Space Weather: The Important Range Between Mild and Extreme, *Space Weather*, 13, 524–528, doi:[10.1002/2015SW001252](https://doi.org/10.1002/2015SW001252).



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With best wishes,

A handwritten signature in black ink that reads 'Christine W. McEntee'.

Christine W. McEntee  
CEO/Executive Director  
American Geophysical Union