

S. 933 HICKENLOOPER\_1 (as modified)



AMENDMENT NO. \_\_\_\_\_ Calendar No. \_\_\_\_\_

Purpose: To require continued research into space weather phenomena.

**IN THE SENATE OF THE UNITED STATES—119th Cong., 2d Sess.**

**S. 933**

To authorize programs for the National Aeronautics and Space Administration for fiscal year 2025, and for other purposes.

Referred to the Committee on \_\_\_\_\_ and  
ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT intended to be proposed by Mr. HICKENLOOPER

Viz:

1 In section 201(b), after paragraph (3), insert the fol-  
2 lowing:

3 (4) SPACE WEATHER RESEARCH FOR EXPLO-  
4 RATION.—

5 (A) IN GENERAL.—The Administrator  
6 shall continue to conduct, and to partner with  
7 Federal agencies or research centers that con-  
8 duct, research into space weather phenomena,  
9 including solar flares, solar energetic particles,  
10 and galactic cosmic rays, for the purpose of  
11 characterizing the radiation environment of

1 cislunar space, the lunar surface, and the Mar-  
2 tian surface.

3 (B) INTEGRATION.—The results of such  
4 research shall be integrated into the Moon to  
5 Mars architecture—

6 (i) to inform the design and shielding  
7 requirements of human-rated lunar landing  
8 capabilities and the orbital lunar outpost;

9 (ii) to develop predictive modeling and  
10 early-warning systems to ensure the safety  
11 of astronauts during travel outside the  
12 Earth's Van Allen radiation belts,  
13 extravehicular activities, and long-duration  
14 habitation; and

15 (iii) to ensure the reliability of lunar  
16 and Martian communications, navigation,  
17 and power infrastructure against space  
18 weather-induced disruptions.