

**AMENDMENT TO THE PERLMUTTER AMENDMENT
IN THE NATURE OF A SUBSTITUTE TO S. 141
OFFERED BY MR. PERLMUTTER**

Page 2, lines 1 through 7, amend to read as follows:

1 “(2) The effects of severe space weather events
2 on the electric power grid, satellites and satellite
3 communications, services, orbits and information,
4 airline operations, astronauts living and working in
5 space, and space based position, navigation, and tim-
6 ing systems could have significant societal, economic,
7 national security, and health impacts.

Page 2, after line 7, insert the following (and make
such conforming changes as may be necessary):

8 “(3) Space weather observation and forecasting
9 are essential for the success of deep space explo-
10 ration.

Page 11, lines 10 through 12, amend to read as fol-
lows:

11 “(3) identify knowledge gaps and their resolu-
12 tion through specific research and development ac-

1 activities to improve operational space weather fore-
2 casting;

Page 11, lines 22 through 24, amend to read as fol-
lows:

3 “(6) include a formal mechanism to share oper-
4 ational needs of space weather forecasters with Fed-
5 eral agencies engaged in space weather research and
6 development activities, the academic community, and
7 the commercial sector; and

Page 12, lines 12 and 13, amend to read as follows:

8 “(3) considers the National Academy of
9 Sciences, Engineering, and Medicine’s decadal sur-
10 vey recommendations;

Page 13, after line 24, insert the following:

11 “(d) REVALUATION OF CONTENT.—Not later than
12 one year after the date on which each Presidential term
13 begins, as well as when determined to be necessary by the
14 Chair of the National Space Council during the inter-
15 vening years, the applicable entities shall review and as-
16 sess the content previously developed under this section
17 and update and resubmit such content when appropriate.

Page 19, lines 1 through 3, amend to read as fol-
lows:

1 “(3) NOAA DATA.—The Secretary shall work
2 with the academic community to make space weath-
3 er related data obtained from operational forecasting
4 available for scientific research.

Page 19, lines 4 through 10, amend to read as fol-
lows:

5 “(e) RESEARCH FOR IMPROVED SPACE WEATHER
6 FORECASTING.—The Secretary, the Director of the Na-
7 tional Science Foundation, and the Administrator of the
8 National Aeronautics and Space Administration shall sup-
9 port basic and applied research which could improve space
10 weather forecasting lead time and accuracy.

