

118TH CONGRESS
2D SESSION

H. R. 8837

To require the Administrator of the National Aeronautics and Space Administration to develop celestial time standardization to support future operations and infrastructure on and around the Moon and other celestial bodies other than Earth, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 26, 2024

Ms. McCLELLAN introduced the following bill; which was referred to the
Committee on Science, Space, and Technology

A BILL

To require the Administrator of the National Aeronautics and Space Administration to develop celestial time standardization to support future operations and infrastructure on and around the Moon and other celestial bodies other than Earth, 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 “Celestial Time Stand-
5 ardization Act”.

1 **SEC. 2. CELESTIAL TIME STANDARDIZATION.**

2 (a) SENSE OF CONGRESS.—It is the sense of Con-
3 gress that—

4 (1) United States leadership of a sustained
5 presence on the Moon and in deep space exploration
6 is important for advancing science, exploration, com-
7 mercial growth, and international partnership;

8 (2) the Artemis and Moon to Mars program of
9 the National Aeronautics and Space Administration
10 (NASA) will involve governmental, commercial, aca-
11 demic, and international partners where there is a
12 need for interoperability between systems;

13 (3) the use of Coordinated Universal Time has
14 challenges when used beyond Earth at other celestial
15 bodies, due to relativistic effects;

16 (4) the United States should lead in developing
17 time standardization for the Moon and other celes-
18 tial bodies other than Earth to support interoper-
19 ability and safe and sustainable operations; and

20 (5) development of such standardization will ad-
21 vance United States leadership in standards setting
22 for global competitiveness, and will benefit other
23 spacefaring countries and entities.

24 (b) DEVELOPMENT OF CELESTIAL TIME STANDARD-
25 IZATION.—The Administrator of NASA, in consultation

1 with the Director of the Office of Science and Technology
2 Policy, shall carry out the following:

3 (1) Enable the development of celestial time
4 standardization, including by leading the study and
5 definition of a coordinated lunar time.

6 (2) Develop a strategy to implement a coordi-
7 nated lunar time that would support future oper-
8 ations and infrastructure on and around the Moon.

9 (3) In carrying out paragraphs (1) and (2)—

10 (A) coordinate with relevant Federal enti-
11 ties, including the Department of Commerce,
12 the Department of Defense, the Department of
13 State, and the Department of Transportation;
14 and

15 (B) consult with—

16 (i) relevant private sector entities;

17 (ii) relevant academic entities; and

18 (iii) relevant international standards
19 setting bodies.

20 (4) Incorporate the following features of a co-
21 ordinated lunar time, to the extent practicable, in
22 the development of the strategy developed pursuant
23 to paragraph (2):

24 (A) Traceability to Coordinated Universal
25 Time.

1 (B) Accuracy sufficient to support preci-
2 sion navigation and science.

3 (C) Resilience to loss of contact with
4 Earth.

5 (D) Scalability to space environments be-
6 yond the Earth-Moon system.

7 (c) REPORT.—Not later than two years after the date
8 of the enactment of this Act, the Administrator of NASA
9 shall submit to the Committee on Science, Space, and
10 Technology of the House of Representatives and the Com-
11 mittee on Commerce, Science, and Transportation of the
12 Senate a report describing the strategy developed pursu-
13 ant to subsection (b)(2), including relevant plans,
14 timelines, and resources required for the implementation
15 of a coordinated lunar time pursuant to such strategy.

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