

Calendar No. 193

119TH CONGRESS }
1st Session

SENATE

{ REPORT
119-82

ASTRONAUT GROUND TRAVEL SUPPORT ACT

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION

ON

S. 582



OCTOBER 20, 2025.—Ordered to be printed

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED NINETEENTH CONGRESS

FIRST SESSION

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Mr. CRUZ, from the Committee on Commerce, Science, and
Transportation, submitted the following

R E P O R T

[To accompany S. 582]

[Including Cost Estimate of the Congressional Budget Office]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 582) to provide for the authorized use of Federal vehicle transportation by certain astronauts, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

PURPOSE OF THE BILL

The purpose of S. 582 is to direct the National Aeronautics and Space Administration (NASA) to authorize the use of official transportation for astronauts between residence and worksite post-missions.

BACKGROUND AND NEEDS

Current human spaceflight missions to the International Space Station are considered to be long-duration missions (any trip to space longer than 30 days).¹ NASA has invested in gathering and analyzing data on changes to human physiology due to extended stays in a zero-gravity environment, as well as the process by which humans reacclimate to gravity upon returning to Earth. Accurate data from returning crew members will help us understand how to better protect the health of astronauts in orbit and mitigate the harmful effects of zero gravity, especially for long-duration missions.

¹NASA, *Mission Duration*, December 12, 2023, <https://www.nasa.gov/wp-content/uploads/2023/12/ochmo-tb-007-mission-duration.pdf>.

Returning crew members take part in scientific experiments carried out at NASA facilities for post-flight baseline data collection. This data will help address the medical challenges of future space exploration missions to the Moon and Mars. The most critical data is time sensitive and needs to be gathered in the initial weeks upon the return to Earth.

Astronauts undergo well-documented adaptive changes due to exposure to weightlessness, including loss of blood volume and blood cells, muscle mass and strength, bone density, and neurosensory responses.² Upon returning to Earth, they face degraded strength, fitness, balance, motor control, and blood pressure regulation.³ NASA has dedicated considerable resources to understanding these physiological changes. It implements a rehabilitation program developed by the space medicine community to ensure timely and safe recovery from prolonged exposure to weightlessness. This enables astronauts to gradually return to normal activities, such as driving.

NASA has determined that returning long-duration astronauts should not drive motor vehicles for 2 weeks (more time may be required in individual cases). However, to allow for extensive baseline data collection, which requires specialized equipment, crew members must be able to travel to and from their homes to NASA facilities and other locations before they are medically cleared to drive.

NASA currently authorizes home-to-work transportation for returning astronauts.⁴ The agency must report to Congress the name and title of any employees who utilize this transportation.⁵ But crew members may be subsequently replaced or reassigned, making it difficult to maintain valid and consistent authorizations for returning astronauts to receive transportation services. This bill would allow NASA's Administrator to authorize use of official transportation between residence and worksite and eliminate the reporting requirement for what has become a routine practice.

SUMMARY OF PROVISION

S. 582 would allow NASA's Administrator to authorize official transportation between residence and worksite and eliminate the requirement for the Administrator to report every mission change, such as a change in date or crew complement, to Congress.

LEGISLATIVE HISTORY

S. 582 was introduced on February 13, 2025, by Senator Cruz (for himself and Senator Peters) and was referred to the Committee on Commerce, Science, and Transportation of the Senate. On March 12, 2025, the Committee met in open Executive Session and, by voice vote, ordered S. 582 reported favorably without amendment.

²Nathan Crawford and Jennifer Turner, *The Human Body in Space*, NASA, February 2, 2021, <https://www.nasa.gov/humans-in-space/the-human-body-in-space/>.

³Monica Edward and Laurie Abadie, *Walk the Line: NASA Studies Physical Performance After Spaceflight*, NASA, September 29, 2015, <https://www.nasa.gov/humans-in-space/walk-the-line-nasa-studies-physical-performance-after-spaceflight/>.

⁴Pursuant to 31 U.S.C. 1344(b)(9).

⁵Pursuant to 31 U.S.C. 1344(d)(4).

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

S. 582, Astronaut Ground Travel Support Act			
As ordered reported by the Senate Committee on Commerce, Science, and Transportation on March 12, 2025			
By Fiscal Year, Millions of Dollars	2025	2025-2030	2025-2035
Direct Spending (Outlays)	0	0	0
Revenues	0	0	0
Increase or Decrease (-) in the Deficit	0	0	0
Spending Subject to Appropriation (Outlays)	*	*	not estimated
Increases <i>net direct spending</i> in any of the four consecutive 10-year periods beginning in 2036?	No	Statutory pay-as-you-go procedures apply?	No
		Mandate Effects	
Increases <i>on-budget deficits</i> in any of the four consecutive 10-year periods beginning in 2036?	No	Contains intergovernmental mandate?	No
		Contains private-sector mandate?	No
* = between zero and \$500,000.			

S. 582 would authorize the National Aeronautics and Space Administration (NASA) to provide transportation for specified purposes for government astronauts after they return to Earth until they are medically cleared to operate a motor vehicle. Using information from NASA, CBO estimates that implementing S. 582 would cost less than \$500,000 over the 2025–2030 period. Any related spending would be subject to the availability of appropriated funds.

The CBO staff contact for this estimate is Johnny Willing. The estimate was reviewed by H. Samuel Papenfuss, Deputy Director of Budget Analysis.

PHILLIP L. SWAGEL,
Director, Congressional Budget Office.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

NUMBER OF PERSONS COVERED

S. 582 would authorize the use of official transportation for astronauts between residence and worksite post-missions. This would only apply to those astronauts or spaceflight participants in the course of their employment for official NASA business. As such, it would only affect a very limited number of persons.

ECONOMIC IMPACT

S. 582 is not expected to have an adverse impact on the Nation's economy. While the amount of time and resources freed up by this reduction in bureaucracy would likely be minimal, it would still represent resources which could be used on other projects.

PRIVACY

S. 582 would not impact the personal privacy of individuals.

PAPERWORK

The Committee anticipates a decrease in paperwork burdens. NASA currently authorizes home-to-work transportation for returning astronauts pursuant to 31 U.S.C. 1344(b)(9), the exercise of which requires the name and title of the employee to be contemporaneously reported to Congress pursuant to 31 U.S.C. 1344(d)(4), which means any change in the mission date or personnel requires a new authorization by NASA's Administrator. The new process would only require a single approval per mission, reducing the paperwork burden to the agency.

CONGRESSIONALLY DIRECTED SPENDING

In compliance with paragraph 4(b) of rule XLIV of the Standing Rules of the Senate, the Committee provides that no provisions contained in the bill, as reported, meet the definition of congressionally directed spending items under the rule.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title.

This section would provide that the bill may be cited as the "Astronaut Ground Travel Support Act".

Section 2. Passenger carrier use for astronaut transportation.

This section would define the terms used in the bill: "government astronaut", "international partner astronaut", "space flight participant", "space support vehicle", "mission", "official purpose", and "passenger carrier".

This section would also add a new section 20150 to title 51. It would enable the NASA Administrator to authorize the use of official NASA vehicles to transport astronauts for an official purpose with the written approval of the Chief of the Astronaut Office.

This section would require an international partner astronaut or space flight participant who is not an employee of the Federal Government to reimburse the U.S. Treasury for transportation under this section.

Lastly, this section would require the NASA Administrator to promulgate regulations necessary to carry out this section.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted

is enclosed in black brackets, new material is printed in *italic*, existing law in which no change is proposed is shown in *roman*):

UNITED STATES CODE

* * * * *

TITLE 51

* * * * *

Subtitle II

* * * * *

CHAPTER 201

* * * * *

Subchapter III: General Administrative Provisions

§ 20131. Public access to information

(a) * * *

* * * * *

(c) * * *

* * * * *

§ 20149. Medical monitoring and research relating to human space flight

(a) * * *

* * * * *

(g) * * *

§ 20150. *Passenger carrier use for astronaut transportation*

(a) *DEFINITIONS.—In this section:*

(1) *GOVERNMENT ASTRONAUT; INTERNATIONAL PARTNER ASTRONAUT; SPACE FLIGHT PARTICIPANT; SPACE SUPPORT VEHICLE.—The terms “government astronaut”, “international partner astronaut”, “space flight participant”, and “space support vehicle” have the meanings given such terms in section 50902.*

(2) *MISSION.—The term “mission” means an assignment to a space support vehicle of one or more—*

(A) government astronauts in the course of their employment; or

(B) space flight participants.

(3) *OFFICIAL PURPOSE.—With respect to transportation, the term “official purpose” means transportation necessary for post-mission activities, including medical research, monitoring, diagnosis, and treatment of a government astronaut or space flight participant before receiving post-mission medical clearance to operate a motor vehicle.*

(4) *PASSENGER CARRIER.*—The term “passenger carrier” means a passenger motor vehicle, aircraft, boat, vessel, or other similar means of transportation that is owned or leased by the United States Government.

(b) *AUTHORITY.*—

(1) *IN GENERAL.*—The Administrator may authorize the use of a passenger carrier to transport a government astronaut or space flight participant between the residence of the individual and various locations if—

(A) such transportation is provided for an official purpose; and

(B) the Chief of the Astronaut Office has approved, in writing, post-mission transportation of government astronauts and space flight participants under this section.

(2) *MAINTENANCE, OPERATION, AND REPAIR.*—The Administrator may maintain, operate, and repair one or more passenger carriers for the purpose of providing transportation pursuant to the authority provided in paragraph (1).

(c) *REIMBURSEMENT.*—Transportation under subsection (b)(1) of an international partner astronaut or a space flight participant who is not an employee of the United States Government shall be subject to reimbursement to the Treasury.

(d) *REGULATIONS.*—The Administrator shall promulgate such regulations as are necessary to carry out this section.

(e) *APPLICABILITY OF SECTION 1344 OF TITLE 31.*—In carrying out subsection (b), the Administrator may expend funds available to the Administration, by appropriation or otherwise, notwithstanding section 1344(a) of title 31.

* * * * *