

111TH CONGRESS  
1ST SESSION

# H. R. 1962

To authorize the Space Shuttle to be flown from 2010 through 2015, and to authorize appropriations for the National Aeronautics and Space Administration for this purpose.

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## IN THE HOUSE OF REPRESENTATIVES

APRIL 2, 2009

Mr. POSEY (for himself and Ms. WASSERMAN SCHULTZ) introduced the following bill; which was referred to the Committee on Science and Technology

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## A BILL

To authorize the Space Shuttle to be flown from 2010 through 2015, and to authorize appropriations for the National Aeronautics and Space Administration for this purpose.

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 “American Space Access  
5 Act”.

6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

1           (1) The United States has been the preeminent  
2 leader in human spaceflight for nearly 50 years.  
3 Under NASA’s leadership, this Nation has engaged  
4 many countries, including former adversaries, in a  
5 series of peaceful space missions that have contrib-  
6 uted to mutual trust and understanding that con-  
7 tinue to this day.

8           (2) The planning and development of the Inter-  
9 national Space Station (ISS) is the culmination of  
10 many of these collaborations, bringing together  
11 through NASA’s leadership a number of foreign  
12 partners to invest and participate in its construction  
13 and operation. It is the most technologically chal-  
14 lenging and complex project ever undertaken. The  
15 United States has been the largest contributor, hav-  
16 ing invested tens of billions of dollars developing,  
17 building, and transporting components of the Inter-  
18 national Space Station to orbit.

19           (3) One of the guiding principles articulated in  
20 National Security Presidential Directive 49, United  
21 States National Space Policy, states, “The United  
22 States considers space capabilities—including the  
23 ground and space segments and supporting links—  
24 vital to its national interests. Consistent with this  
25 policy, the United States will preserve its rights, ca-

1 pabilities, and freedom of action in space; dissuade  
2 or deter others from either impeding those rights or  
3 developing capabilities intended to do so; take those  
4 actions necessary to protect its space capabilities; re-  
5 spond to interference; and deny, if necessary, adver-  
6 saries the use of space capabilities hostile to U.S.  
7 national interests”.

8 (4) The International Space Station is nearing  
9 completion, with remaining ISS construction mis-  
10 sions scheduled to be concluded in 2010. The Sta-  
11 tion’s crew size will increase to 6, enabling the full  
12 utilization of its laboratories and research facilities  
13 in a microgravity environment for the decade to  
14 come. Routine and assured access to the Station is  
15 critical if we are to capitalize on our investment.

16 (5) In January 2004, the President directed  
17 NASA to honor our international commitments to  
18 complete the assembly of the International Space  
19 Station and retire the Space Shuttle by 2010. The  
20 directive also called for the development of a new  
21 system to enable astronauts to travel beyond low  
22 Earth orbit. This system, the Constellation System,  
23 consisting of the Orion crew exploration vehicle and  
24 Ares launch vehicle, would also be capable of trav-  
25 eling to the International Space Station but would

1 not be available until 4 years after the projected re-  
2 tirement of the Space Shuttle. This plan was ratified  
3 by Congress in the National Aeronautics and Space  
4 Administration Authorization Act of 2005 (Public  
5 Law 109–155).

6 (6) Other nations are now investing heavily to  
7 develop manned spaceflight and robotic capabilities.  
8 During the planned gap following retirement of the  
9 Space Shuttle, these nations are expected to enhance  
10 their space capabilities, jeopardizing our Nation’s  
11 preeminence and our ability to influence other space-  
12 faring nations, contrary to the national policy (Na-  
13 tional Security Presidential Directive 49). United  
14 States influence in world affairs and our ability to  
15 shape future peaceful uses in space will be imperiled.

16 (7) Congress believes it is imperative that  
17 NASA reduce our Nation’s dependence on foreign  
18 launch providers to access the International Space  
19 Station. The planned gap has expanded to 5 years,  
20 and if development problems are encountered, the  
21 gap will continue to widen. A 5-year or more gap is  
22 too long to rely on other nations to access the Inter-  
23 national Space Station, the bulk of which we have  
24 provided.

1           (8) Unless Space Shuttle operations are ex-  
2           tended beyond 2010, the United States will be heav-  
3           ily reliant on Russia to supply crew and possibly  
4           cargo transport services to the International Space  
5           Station during the gap period of 2010 through  
6           2015. There is no other proven and reliable means  
7           of transporting our astronauts into space during this  
8           period.

9           (9) The United States should not increase its  
10          reliance on Russia to transport American astronauts  
11          into space, given the increasingly divergent views  
12          and posturing from Russia. Russia opposes the  
13          United States plan to base an antimissile radar sys-  
14          tem in the Czech Republic and interceptor missiles  
15          in Poland to counter the threat posed by the Iranian  
16          nuclear weapons and missile programs. Russia also  
17          suspended its participation in the Conventional  
18          Forces in Europe (CFE) treaty, one of the most sig-  
19          nificant arms control agreements of the Cold War  
20          years. Additionally, Russia continues to arm some of  
21          America's adversaries. Despite United States objec-  
22          tions, Russia provided billions of dollars worth of  
23          weapons to the regime of Hugo Chavez in Venezuela  
24          in 2006. Such meddling is a possible violation of the  
25          Monroe Doctrine and a throwback to the Cold War

1 era. Even more troublesome is the Russian history  
2 of weapons trading with Iran. Russia has supplied  
3 advanced conventional arms technology, missile tech-  
4 nology, and nuclear technologies to this very anti-  
5 American regime.

6 (10) In the late 1990s, Russia fell short in ful-  
7 filling its commitment to the International Space  
8 Station.

9 (11) NASA was forced to transfer hundreds of  
10 millions of dollars to enable the Russians to com-  
11 plete the critical Space Station service module  
12 Zvezda, without which the International Space Sta-  
13 tion could not operate.

14 (12) Russia delayed completion of the Zvezda  
15 service module for several years. Under the Inter-  
16 national Space Station agreement, the Russian gov-  
17 ernment had committed to fund as well as build the  
18 Zvezda service module. Subsequent transfers from  
19 the United States, in order to complete the module,  
20 reflect serious Russian mismanagement in the field  
21 of space.

22 (13) In 2000, while Russia was failing to meet  
23 its commitment to the International Space Station,  
24 Russia was diverting financial and human resources  
25 away from fulfilling its International Space Station

1 commitments in order to keep the Russian's Mir  
2 Space Station aloft.

3 (14) Russia's past shortcomings in fulfilling  
4 commitments to its international space partners  
5 should serve as a warning to the United States as  
6 we consider increased reliance on Russian space  
7 services in the future. It is not prudent for the  
8 United States to depend on Russia for access to  
9 space given our past experience with this relation-  
10 ship.

11 (15) The United States has already invested  
12 tens of billions of dollars in the International Space  
13 Station program since its inception.

14 (16) There is much research of great value  
15 being conducted in space, and on the International  
16 Space Station, that may yield tremendous gains. Re-  
17 search conducted on the International Space Station  
18 may help scientists back on Earth develop medicines  
19 to treat diseases and help us better understand the  
20 Earth's climate. Many scientists believe that the  
21 microgravity environment of space will enable the  
22 development of new drugs, vaccines, and other thera-  
23 pies. Equipment on the International Space Station  
24 will monitor stratospheric gases, and investigate  
25 ozone chemistry.

1           (17) To ensure that the United States realizes  
2 the dividends from the considerable investment we  
3 have made in the International Space Station, we  
4 need to ensure continued access to space for our as-  
5 tronauts. However, NASA's plan for transport of  
6 crew to and from the International Space Station  
7 fails to provide necessary redundancies to provide  
8 assured access to space.

9           (18) NASA anticipates that the Russian Soyuz  
10 spacecraft will be the only vehicle for astronaut crew  
11 rotation to the International Space Station after  
12 2010. From 2011 until the planned operation of  
13 Orion in 2015, NASA likely has no other option for  
14 transporting American astronauts to space other  
15 than on Russian vehicles.

16           (19) Due to NASA's lack of a backup plan for  
17 reliance on the Russians for transport of American  
18 astronauts to space, the United States needs a bet-  
19 ter approach. The best approach is the Space Shut-  
20 tle, a proven, domestic source of space transport for  
21 assured access to space, including the International  
22 Space Station, for crew and cargo transport.

23           (20) With 2 Shuttle missions per year during  
24 the human spaceflight program flight gap between  
25 Shuttle and Orion, currently scheduled from 2010

1 through 2015, we can replace our need to rely on  
2 the Russians for crew rotation for the International  
3 Space Station.

4 (21) Savings from replacing Russian transport  
5 services to the International Space Station with the  
6 Space Shuttle would pay for a portion of the costs  
7 for flying 2 Space Shuttle missions per year.

8 (22) Only by closing the gap between 2010 and  
9 2015, or until the Orion is operational, will our Na-  
10 tion be able to keep our Nation's highly skilled and  
11 critically important spaceworkers and engineers  
12 gainfully employed, and mitigate the loss of critical  
13 skills.

14 (23) By extending Space Shuttle operations,  
15 NASA may realize considerable savings by no longer  
16 having to pay retention bonuses to critical space  
17 workers. But retention bonuses would not be the  
18 only added costs associated with the end of Space  
19 Shuttle operations when critical skilled workers leave  
20 NASA or its contractors. Recruitment incentives for  
21 new workers and contract cost increases could also  
22 be incurred by NASA since the majority of the Ken-  
23 nedy Space Center's workforce are contractors.

24 (24) The success of the Constellation program  
25 will depend on having the most skilled and experi-

1        enced workforce possible. The workforce gap, as cur-  
2        rently envisioned by NASA, will jeopardize this.  
3        NASA has acknowledged that thousands of critical  
4        space workers will lose their jobs in the transition  
5        from the Space Shuttle to the Constellation pro-  
6        gram. Continued operation of the Space Shuttle, but  
7        on a reduced flight requirement, while also inte-  
8        grating these workers into the Orion program, is the  
9        best way to retain many of these critical workers  
10       and skill sets.

11            (25) An August 2007 study by the Government  
12        Accountability Office, “NASA Progress Made on  
13        Strategic Human Capital Management, but Future  
14        Program Challenges Remain,” stated that “the  
15        agency as a whole faces challenges in recruiting and  
16        retaining highly experienced senior-level engineers in  
17        certain specialties. NASA’s principal workforce chal-  
18        lenge will be faced in the transition to the next gen-  
19        eration of human space flight systems.”.

20        **SEC. 3. EXTENDING SPACE SHUTTLE OPERATIONS.**

21            (a) USE OF SPACE SHUTTLE FOR ACCESS TO  
22        SPACE.—NASA shall fly not less than 2 Space Shuttle  
23        missions per year for crew transport, instead of pur-  
24        chasing Russian crew and cargo services, for the period  
25        beginning in 2010 and ending—

1 (1) in 2015;

2 (2) when Orion is operational; or

3 (3) when NASA has certified the safe operation  
4 of an available United States commercial capability,  
5 whichever occurs first. There are authorized to be appro-  
6 priated to NASA such sums as may be necessary, in addi-  
7 tion to amounts otherwise authorized, to carry out this  
8 subsection.

9 (b) INSUFFICIENT FUNDING.—Except as provided  
10 under subsection (c), the requirements of this Act shall  
11 have effect only to the extent that sufficient funding is  
12 appropriated, as authorized under subsection (a). Suffi-  
13 cient funding is defined as funds required to fully or par-  
14 tially comply with the requirements of this Act.

15 (c) REPORT TO CONGRESS.—NASA shall report to  
16 Congress not later than 90 days after the date of enact-  
17 ment of this Act on the specific costs and actions needed  
18 to extend the operation of the Space Shuttle in accordance  
19 with this Act.

20 (d) OPERATIONAL EFFICIENCIES.—As soon as pos-  
21 sible, but no later than March 31, 2011, NASA shall in-  
22 vestigate areas of reduced operations and enhanced cost  
23 savings and implement those that do not impinge the safe  
24 operation of the Space Shuttle program, including the fol-  
25 lowing:

1           (1) The possible retirement of one Space Shut-  
2           tle orbiter, leaving 2 to remain operational, in a  
3           manner that ensures the safe operation of the Space  
4           Shuttle program.

5           (2) Significantly reducing changes to the design  
6           of the Space Shuttle orbiters, in a manner that en-  
7           sures the safe operation of the Space Shuttle pro-  
8           gram. This shall include changes to the Space Shut-  
9           tle software systems.

10          (3) Significantly reducing Space Shuttle orbiter  
11          configuration operations and payload configuration  
12          operations, in a manner that ensures the safe oper-  
13          ation of the Space Shuttle program.

14          (4) Maximizing the use of shared personnel be-  
15          tween the continued operation of the Space Shuttle  
16          and Constellation and other NASA programs.

17          (e) FACILITIES.—If conflicts arise in NASA’s efforts  
18          to allocate facilities, personnel, and other resources in  
19          order to fly the Space Shuttle as well as continue the de-  
20          velopment of Constellation, then NASA shall identify in  
21          a report to Congress in advance such conflicts, along with  
22          recommendations as to how they can be mitigated.

23          **SEC. 4. EXPEDITING CONSTELLATION.**

24          (a) REPORT TO CONGRESS.—Not later than 3  
25          months after the date of enactment of this Act, NASA

1 shall report to Congress on the amount of funding needed  
2 to expedite the schedule of the Orion Crew Exploration  
3 Vehicle and the Ares I Crew Vehicle and associated  
4 ground support systems. Such report shall—

5           (1) contain a description and timeline for an ex-  
6           pedited schedule to bring Orion and Ares I on line  
7           sooner; and

8           (2) outline the additional funding needed to  
9           achieve this expedited schedule.

10       (b) AUTHORIZATION OF APPROPRIATIONS.—There  
11 are authorized to be appropriated to NASA such sums as  
12 may be necessary to achieve the goals of this section. Such  
13 funding shall be in addition to any funding needed to con-  
14 tinue operations of the Shuttle beyond 2010.

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