

Calendar No. 214

116TH CONGRESS
1ST SESSION

H. R. 1396

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 23, 2019

Received; read twice and placed on the calendar

AN ACT

To award Congressional Gold Medals to Katherine Johnson and Dr. Christine Darden, to posthumously award Congressional Gold Medals to Dorothy Vaughan and Mary Jackson, and to award a Congressional Gold Medal to honor all of the women who contributed to the success of the National Aeronautics and Space Administration during the Space Race.

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 “Hidden Figures Con-
5 gressional Gold Medal Act”.

6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

1 (1) In 1935, the National Advisory Committee
2 for Aeronautics (referred to in this section as
3 “NACA”) hired five women to serve as the first
4 “computer pool” at the Langley Memorial Aero-
5 nautical Laboratory where those women took on
6 work making calculations that male engineers had
7 made previously.

8 (2) During the 1940s, NACA began recruiting
9 African-American women to work as computers and
10 initially separated those women from their White
11 counterparts in a group known as the “West Area
12 Computers” where the women were restricted to seg-
13 regated dining and bathroom facilities.

14 (3) Katherine Johnson was born on August 26,
15 1918, in White Sulphur Springs, West Virginia.

16 (4) In 1953, Katherine Johnson began her ca-
17 reer in aeronautics as a computer in the segregated
18 West Area Computing unit described in paragraph
19 (2).

20 (5) As a member of the Flight Research Divi-
21 sion, Katherine Johnson analyzed data from flight
22 tests. After NACA was reformulated into the Na-
23 tional Aeronautics and Space Administration (re-
24 ferred to in this section as “NASA”), Katherine
25 Johnson—

1 (A) calculated the trajectory for Alan
2 Shepard's Freedom 7 mission in 1961, which
3 was the first human spaceflight by an indi-
4 vidual from the United States;

5 (B) coauthored a report that provided the
6 equations for describing orbital spaceflight with
7 a specified landing point, which made her the
8 first woman to be recognized as an author of a
9 report from the Flight Research Division;

10 (C) was asked to verify the calculations
11 when electronic computers at NASA were used
12 to calculate the orbit for John Glenn's Friend-
13 ship 7 mission; and

14 (D) provided calculations for NASA
15 throughout her career, including for the Apollo
16 missions.

17 (6) Katherine Johnson retired from NASA in
18 1986.

19 (7) Dr. Christine Darden was born on Sep-
20 tember 10, 1942, in Monroe, North Carolina.

21 (8) In 1962, Dr. Christine Darden graduated
22 from Hampton Institute with a B.S. in Mathematics
23 and a teaching credential.

1 (9) Dr. Christine Darden attended Virginia
2 State University where she studied aerosol physics
3 and earned an M.S. in Applied Mathematics.

4 (10) Dr. Christine Darden began her career in
5 aeronautics in 1967 as a data analyst at NASA's
6 Langley Research Center (referred to in this section
7 as "Langley") before being promoted to aerospace
8 engineer in 1973. Her work in this position resulted
9 in the production of low-boom sonic effects, which
10 revolutionized aerodynamics design.

11 (11) Dr. Christine Darden completed her edu-
12 cation by earning a Ph.D. in Mechanical Engineer-
13 ing from George Washington University in 1983.

14 (12) While working at NASA, Dr. Christine
15 Darden—

16 (A) was appointed to be the leader of the
17 Sonic Boom Team, which worked on designs to
18 minimize the effects of sonic booms by testing
19 wing and nose designs for supersonic aircraft;

20 (B) wrote more than 50 articles on aero-
21 nautics design; and

22 (C) became the first African American to
23 be promoted to a position in the Senior Execu-
24 tive Service at Langley.

1 (13) Dorothy Vaughan was born on September
2 20, 1910, in Kansas City, Missouri.

3 (14) Dorothy Vaughan began working for
4 NACA in 1943. Dorothy Vaughan—

5 (A) started at NACA as a member of the
6 West Area Computing unit;

7 (B) was promoted to be the head of the
8 West Area Computing unit, becoming NACA's
9 first African-American supervisor, a position
10 that she held for 9 years; and

11 (C) became an expert programmer in
12 FORTRAN as a member of NASA's Analysis
13 and Computation Division.

14 (15) Dorothy Vaughan retired from NASA in
15 1971 and died on November 10, 2008.

16 (16) Mary Jackson was born on April 9, 1921,
17 in Hampton, Virginia.

18 (17) Mary Jackson started her career at NACA
19 in 1951, working as a computer as a member of the
20 West Area Computing unit.

21 (18) After petitioning the City of Hampton to
22 allow her to take graduate-level courses in math and
23 physics at night at the all-White Hampton High
24 School, Mary Jackson was able to complete the re-

quired training to become an engineer, making her
NASA's first female African-American engineer.

(19) Mary Jackson—

(A) while at NACA and NASA—

(i) worked in the Theoretical Aerodynamics Branch of the Subsonic-Transonic Aerodynamics Division at Langley where she analyzed wind tunnel and aircraft flight data; and

(ii) published a dozen technical papers that focused on the boundary layer of air around airplanes; and

(B) after 21 years working as an engineer at NASA, transitioned to a new job as Langley's Federal Women's Program Manager where she worked to improve the prospects of NASA's female mathematicians, engineers, and scientists.

(20) Mary Jackson retired from NASA in 1985 and died in 2005.

(21) These four women, along with the other African-American women in NASA's West Area Computing unit, were integral to the success of the early space program. The stories of these four women exemplify the experiences of hundreds of

1 women who worked as computers, mathematicians,
2 and engineers at NACA beginning in the 1930s and
3 their handmade calculations played an integral role
4 in—

5 (A) aircraft testing during World War II;

6 (B) supersonic flight research;

7 (C) sending the Voyager probes to explore
8 the solar system; and

9 (D) the United States landing the first
10 man on the lunar surface.

11 **SEC. 3. CONGRESSIONAL GOLD MEDALS.**

12 (a) PRESENTATION AUTHORIZED.—The Speaker of
13 the House of Representatives and the President pro tem-
14 pore of the Senate shall make appropriate arrangements
15 for the presentation, on behalf of Congress, of five gold
16 medals of appropriate design as follows:

17 (1) One gold medal to Katherine Johnson in
18 recognition of her service to the United States as a
19 mathematician.

20 (2) One gold medal to Dr. Christine Darden for
21 her service to the United States as an aeronautical
22 engineer.

23 (3) In recognition of their service to the United
24 States during the Space Race—

1 (A) one gold medal commemorating the life
2 of Dorothy Vaughan; and

3 (B) one gold medal commemorating the
4 life of Mary Jackson.

5 (4) One gold medal in recognition of all women
6 who served as computers, mathematicians, and engi-
7 neers at the National Advisory Committee for Aero-
8 nautics and the National Aeronautics and Space Ad-
9 ministration between the 1930s and the 1970s (re-
10 ferred to in this section as “recognized women”).

11 (b) DESIGN AND STRIKING.—For the purpose of the
12 awards under subsection (a), the Secretary of the Treas-
13 ury (referred to in this Act as the “Secretary”) shall strike
14 each gold medal described in that subsection with suitable
15 emblems, devices, and inscriptions, to be determined by
16 the Secretary.

17 (c) TRANSFER OF CERTAIN MEDALS AFTER PRES-
18 ENTATION.—

19 (1) SMITHSONIAN INSTITUTION.—

20 (A) IN GENERAL.—After the award of the
21 gold medal commemorating the life of Dorothy
22 Vaughan under subsection (a)(3)(A) and the
23 award of the gold medal in recognition of recog-
24 nized women under subsection (a)(4), those

1 medals shall be given to the Smithsonian Insti-
2 tution where the medals shall be—

3 (i) available for display, as appro-
4 priate; and

5 (ii) made available for research.

6 (B) SENSE OF CONGRESS.—It is the sense
7 of Congress that the Smithsonian Institution
8 should make the gold medals received under
9 subparagraph (A) available for—

10 (i) display, particularly at the Na-
11 tional Museum of African American His-
12 tory and Culture; or

13 (ii) loan, as appropriate, so that the
14 medals may be displayed elsewhere.

15 (2) TRANSFER TO FAMILY.—After the award of
16 the gold medal in honor of Mary Jackson under sub-
17 section (a)(3)(B), the medal shall be given to her
18 granddaughter, Wanda Jackson.

19 **SEC. 4. DUPLICATE MEDALS.**

20 Under regulations that the Secretary may promul-
21 gate, the Secretary may strike and sell duplicates in
22 bronze of the gold medals struck under this Act, at a price
23 sufficient to cover the cost of the medals, including labor,
24 materials, dies, use of machinery, and overhead expenses.

1 **SEC. 5. STATUS OF MEDALS.**

2 (a) NATIONAL MEDALS.—The medals struck under
3 this Act are national medals for purposes of chapter 51
4 of title 31, United States Code.

5 (b) NUMISMATIC ITEMS.—For purposes of sections
6 5134 and 5136 of title 31, United States Code, all medals
7 struck under this Act shall be considered to be numismatic
8 items.

9 **SEC. 6. AUTHORITY TO USE FUND AMOUNTS; PROCEEDS OF**
10 **SALE.**

11 (a) AUTHORITY TO USE FUND AMOUNTS.—There is
12 authorized to be charged against the United States Mint
13 Public Enterprise Fund such amounts as may be nec-
14 essary to pay for the costs of the medals struck under
15 this Act.

16 (b) PROCEEDS OF SALE.—Amounts received from the
17 sale of duplicate bronze medals authorized under section
18 4 shall be deposited into the United States Mint Public
19 Enterprise Fund.

20 **SEC. 7. DETERMINATION OF BUDGETARY EFFECTS.**

21 The budgetary effects of this Act, for the purpose of
22 complying with the Statutory Pay-As-You-Go Act of 2010,
23 shall be determined by reference to the latest statement
24 titled “Budgetary Effects of PAYGO Legislation” for this
25 Act, submitted for printing in the Congressional Record
26 by the Chairman of the House Budget Committee, pro-

1 vided that such statement has been submitted prior to the
2 vote on passage.

Passed the House of Representatives September 19,
2019.

Attest: CHERYL L. JOHNSON,
Clerk.

Calendar No. 214

116TH CONGRESS
1ST Session

H. R. 1396

AN ACT

To award Congressional Gold Medals to Katherine Johnson and Dr. Christine Darden, to posthumously award Congressional Gold Medals to Dorothy Vaughan and Mary Jackson, and to award a Congressional Gold Medal to honor all of the women who contributed to the success of the National Aeronautics and Space Administration during the Space Race.

SEPTEMBER 23, 2019

Received; read twice and placed on the calendar