



State of Tennessee

HOUSE JOINT RESOLUTION NO. 139

By Representatives Akbari, Camper

A RESOLUTION to recognize the professional achievements of Katherine Coleman Goble Johnson.

WHEREAS, it is the distinct honor and privilege of the members of this General Assembly to recognize those individuals who, through their determination and indomitable spirit, defy the odds to accomplish greatness; and

WHEREAS, Katherine Coleman Goble Johnson is one such individual, a physicist and mathematician who was an essential player during the burgeoning years of the United States' aeronautics and space programs; and

WHEREAS, Ms. Johnson was known for accuracy in computerized celestial navigation, and her technical work at the National Aeronautics and Space Administration (NASA) spanned decades, during which she calculated the trajectories, launch windows, and emergency back-up return paths for many flights, including the early NASA missions of John Glenn and Alan Shepard, the 1969 Apollo 11 flight to the Moon, the Space Shuttle program, and the early plans for the Mission to Mars; and

WHEREAS, though her accomplishments are awe-inspiring and many, Ms. Johnson's path to becoming an influential mathematician working at NASA was not an easy one; as a woman of color growing up in early twentieth century America, she was beset with hurdles that might have deterred others less resolute than she; and

WHEREAS, the youngest of four children, Ms. Johnson was born in White Sulphur Springs, Greenbrier County, West Virginia, on August 26, 1918, two years before the ratification of the amendment that granted women the right to vote and forty-six years before the Civil Rights Act; and

WHEREAS, during her formative years, the "separate but equal" injustice of Jim Crow was in full effect; Greenbrier County did not offer schooling for African-American children past the eighth grade. Therefore, Katherine and her siblings had to travel to Kanawha County to attend high school; and

WHEREAS, because she had so excelled in her classes, Ms. Johnson entered high school at age ten, graduating early and entering college at the age of fifteen; and

WHEREAS, Katherine Johnson matriculated at West Virginia State University, where she was taken under the wing of her professors once they realized what a bright, inquisitive mind she possessed; while at West Virginia State University, she took every mathematics course in the catalog, and a class in analytic geometry was created for her; and

WHEREAS, in 1937, at the age of eighteen, Ms. Johnson graduated summa cum laude with Bachelor of Science degrees in mathematics and French; she went on to pursue graduate work at West Virginia University, becoming the first African-American woman to desegregate the graduate school there; and

WHEREAS, upon completion of her studies, Katherine Johnson went into teaching, the only option for her in her community at that time; when she heard that the National Advisory Committee for Aeronautics (NACA), the precursor of NASA, was recruiting, she applied immediately, and in 1953, she began working for NACA on the Langley campus; and

WHEREAS, in the 1950s, NACA hired women, or "girls," as they were referred to, to work as "computers" in what was then their Guidance and Navigation Department; these women would do calculations that the engineers needed worked or verified. NACA specifically recruited African-American women with college degrees; while these women did the same work as their white counterparts, they were paid less and relegated to the segregated west section of

HJR 139

the Langley campus, with a "colored girls" bathroom and a table for the "colored" computers; and

WHEREAS, in addition to its influence on space travel, the research conducted at Langley between World War I and World War II was fundamental to air travel—making airplanes safer, more stable, and faster and giving rise to the technology that is ubiquitous today; and

WHEREAS, soon after her arrival at NACA's Langley Research Center, Katherine Johnson became a standout; rather than mindlessly perform her calculations, she wanted to know the "hows" and "whys." Without invitation, she began attending meetings and briefings; she became known for her training in geometry, and the men began to increasingly rely upon her; and

WHEREAS, in 1962, when President John F. Kennedy charged the country to send a man to the moon, Ms. Johnson became part of the team; she began calculating the trajectory for America's first space trip with Alan Shepard's 1961 mission, an early step toward a moon landing. She went on to do the calculations for the first moon landing in 1969; and

WHEREAS, at a time when electronic computers were taking over the complex calculations needed for space travel, Ms. Johnson was still the trusted authority; before John Glenn would consent to his mission to orbit the Earth, he wanted Ms. Johnson to verify the output of the electronic computers; and

WHEREAS, Katherine Johnson retired from NASA in 1986, after thirty-three years of service; during her time with the organization, she was often recognized for her work, receiving the NASA Lunar Orbiter Award and three NASA Special Achievement awards; and

WHEREAS, in November 2015, President Barack Obama presented Ms. Johnson with the Presidential Medal of Freedom, the nation's highest civilian honor; this honor is bestowed upon individuals who have made especially meritorious contributions to the security or national interests of the United States, to world peace, or to cultural or other significant public or private endeavors; and

WHEREAS, in May 2016, Katherine Johnson returned to NASA's Langley Research Center for the dedication of the new \$30 million, 40,000-square-foot computational research center, named in her honor; and

WHEREAS, in September 2016, Margot Lee Shetterly's *Hidden Figures: The American Dream and the Untold Story of the Black Women Mathematicians Who Helped Win the Space Race* was published; the book served as the inspiration for the film, *Hidden Figures*, which chronicles the lives of Katherine Johnson, Dorothy Vaughan, and Mary Jackson, three brilliant African-American women who worked at NASA as "human computers"; and

WHEREAS, in addition to her contributions to aeronautics and space travel, Ms. Johnson serves as a role model for young women, encouraging them to explore the vast possibilities of the STEM (Science, Technology, Engineering, and Mathematics) disciplines; and

WHEREAS, Katherine Johnson has demonstrated that the limitations placed on individuals because of factors such as race or gender are false, and, though unfair and often daunting, they prove frail in the face of resilient determination; and

WHEREAS, Ms. Johnson's life is a testament to the power of perseverance in spite of seemingly insurmountable obstacles, and she has taken her rightful place among the pantheon of great American minds. It is thus fitting that she be honored and commended; now, therefore

BE IT RESOLVED BY THE HOUSE OF REPRESENTATIVES OF THE ONE HUNDRED TENTH GENERAL ASSEMBLY OF THE STATE OF TENNESSEE, THE SENATE CONCURRING, that we hereby honor and congratulate Katherine Coleman Goble Johnson on her trailblazing career with NASA, expressing our sincere gratitude for her contributions to aeronautics and space travel, as well as for the lasting legacy she has provided for young women, and wishing her all the best in the years to come.

BE IT FURTHER RESOLVED, that an appropriate copy of this resolution be prepared for presentation with this final clause omitted from such copy.

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ADOPTED: March 2, 2017



BETH HARWELL, SPEAKER
HOUSE OF REPRESENTATIVES



RANDY MCNALLY
SPEAKER OF THE SENATE

APPROVED this 6th day of March 2017



BILL HASLAM, GOVERNOR