

Notable African American Scientists and Inventors In the Fields of Electronics, Physics, Engineering, and Space.



**LEWIS HOWARD
LATIMER (1848-1928)**

began his career as a mechanical inventor when he worked for a patent attorney in Massachusetts. One of his earliest inventions was a toilet system for railroad cars in 1873. Latimer worked closely with both Alexander Graham Bell and Thomas Edison. He prepared mechanical drawings for Bell and conducted research at the Edison Electric Light Company. Latimer published an engineering book, *Incandescent Electric Lighting* in 1890, and invented an inexpensive electric lamp using a carbon filament.

FREDERICK M. JONES (1892-1961)

served in World War I and became a garage mechanic when he returned home from the war. As a self-taught electrician, Jones soon began developing numerous inventions. Some examples were a self-starting gasoline motor, air conditioning units, refrigerator thermostats, generators, and a ticket dispensing machine. Throughout his life, Jones received over 60 patents for his inventions and ideas.

LEWIS W. ROBERTS (1913-1995) received a



M.S. from the University of Michigan in 1937. Roberts holds over eleven patents for electronic devices. He was especially interested in microwave technology. Some of the many positions he held throughout his life were Chief of the Optics and Microwave Laboratory at NASA and founder and President of Microwave Associates (M-A Com).

O.S. OZZIE WILLIAMS (1921-) earned a B.S.

and a M.S. in Aeronautical Engineering. During World War II, he worked for Republic Aviation Inc. After this, Williams joined Greer Hydraulics Inc. in 1956 and aided in the development of the first airborne radar beacon. In 1961, he worked at Grumman International where he became a Rocket Propulsion Engineer. While at Grumman, Williams worked on rocket control systems that were eventually used by NASA during the Apollo moon landing.



GRANVILLE T. WOODS

(1856-1910) worked as an apprentice blacksmith and machinist during his youth. Although he had to leave school to begin working at the age of 10, he continued to educate himself any way he could. Woods began working with the railroad and eventually became an engineer. His first patent was for an improved steam boiler furnace in 1884. Woods also began his own company, the Woods Electrical Company in Cincinnati, Ohio. Other companies, such as General Electric, American Bell Telephone Company, and Westinghouse Air Brake Company, bought many of Woods' ideas. One of his most important patents came in 1887 when he patented the Synchronous Multiplex Railway Telegraph. This telegraph system allowed moving trains to communicate with train stations. It helped to decrease train wrecks and was based on the principle of electromagnetic induction.



Historical Electronics Museum

Mailing Address: P.O. Box 746 M.S. 4015, Baltimore, MD 21203
Location: 1745 West Nursery Road, Linthicum, MD 21090
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CALDWELL MCCOY JR. (1933-1990)



attended the University of Connecticut where he received a B.S. in Electrical Engineering. He also attended George Washington University where he received a M.S.

in Mathematics and a Doctorate of Science in Telecommunications. Between 1956-59, McCoy served in the Air Force as a Combat Flyer. In 1959 he began working at the Naval Research Laboratory. Here McCoy developed and tested submarine computer programs designed to send and detect underwater signals. After working with the Navy, McCoy also went on to achieve great recognition working for the U.S. Department of Energy and NASA.

GUION BLUFORD (1942-) was an Air

Force pilot before he became an astronaut in 1979. On August 30th, 1983, Bluford became the first African American astronaut in space. Since then, he has flown on many missions and has logged over 688 hours in space.

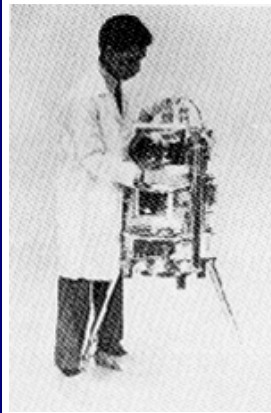


MAE JEMISON (1956-)

attended Stanford University when she was sixteen and graduated with a B.S. in Chemical Engineering and a B.A. in African American Studies. Next, she attended Cornell Medical School and received her Doctorate in Medicine in 1981. Following this, Jemison spent two years in the Peace Corps as a medical officer. She also practiced medicine in Los Angeles before joining NASA in 1987. On September 12th, 1992, Jemison became the first female African American astronaut to travel into space. While at NASA, she worked as a Science Mission Specialist aboard the Space Lab. Since 1993, Jemison has been teaching Environmental Studies at Dartmouth College.



GEORGE R. CARRUTHERS (1939-) attended



the University of Illinois where he received a B.S. in Physics, a M.S. in Physics, and a PhD. in Aeronautical and Astronomical Engineering. Carruthers worked at NASA and the Naval Research Laboratory where he researched rocket astronomy and ultraviolet light. This research led to his invention of an ultraviolet camera used on the moon.

OTIS BOYKIN (1920-1982) attended Fisk

University and the Illinois Institute of Technology. He invented resistors that were used in guided missiles and computers, and helped reduce the cost of electronic equipment. Boykin also designed a control unit for pacemakers and a burglar proof cash register.



ANNIE EASLEY (1933-) began working for



NASA in 1955. She received her B.S. in Mathematics in 1977 from Cleveland State University. Easley has worked on numerous NASA projects including the development of a computer code to analyze solar wind and energy. Her research has also been used to design everyday items such as storage batteries used in electrical cars.

Information used in this brochure came from the Princeton University website, *Faces of Science: African Americans in the Sciences*.

Pictures came from the following websites:
www.princeton.edu/~mcbrown/display/faces.html
<http://inventors.about.com/library/inventors/blatimer.htm>
<http://tap.mills.edu/pioneers/>
www.aaregistry.com/african_american_history/1474/Otis_Boykin_Black_inventor
www.windows.ucar.edu/cgi-bin/tour_def/people/astronauts/bluford.html