

Benjamin Banneker finishes work on what would be the first clock made in the United States.

1753

Benjamin Banneker's *Pennsylvania, Delaware, Maryland, and Virginia Almanak and Ephemeris* is published.

1791

The Institute for Colored Youth, which would later become Cheyney University of Pennsylvania, is founded as the first HBCU in the United States.

1837

Congress passes the Civil Rights Act, conferring citizenship on African Americans and granting them equality under the law.

1866

Fisk University is founded by leaders in the American Missionary Society.

1866

Edward Alexander Bouchet becomes the first African American and the sixth American of any race to receive a Ph.D. in Physics from Yale University.

1876

In Plessy v. Ferguson, the U.S. Supreme Court rules segregated, or “separate but equal,” public facilities for whites and blacks legal.

1896

The National Association for the Advancement of Colored People (NAACP) is founded.

1909

Elmer Samuel Imes becomes the second African American to receive a Ph.D. in Physics from the University of Michigan.

1918

Physicist Robert A. Thornton attends a lecture by Albert Einstein at the Belasco Theater in Washington, D.C. while he is a student at Howard University.

1921

Inventor Garrett Augustus Morgan patents the three-position traffic signal.

1923

Civil rights leader Malcolm X is born in Omaha, Nebraska.

1925

One of the greatest African American physicists for his years of work in magnetism and superconductivity, Warren E. Henry earns his Ph.D. in Physical Chemistry from the University of Chicago.

1941

J. Ernest Wilkins earns his Ph.D. in physics at the age of 19.

1942

The Fisk Infrared Institute is established under the direction of Dr. Elmer Imes.

1943

Project Diana, an effort by the US Army's Signal Corps to establish if radio communication with the Moon is possible, is successful with Walter McAfee as part of the team.

1946

President Harry Truman issues an executive order that desegregates the military.

1946

Physicist and chemist Herman Russell Branson contributes to the discovery of the alpha helix at California Institute of Technology, for which Linus Pauling won the Nobel Prize.

1948

Physicist Meredith "Flash" Gourdine, a pioneer in the research of electro gas dynamics, wins the silver medal in the men's long jump at the Helsinki Summer Olympics.

1952

In *Brown v. Board of Education of Topeka, Kansas*, the U.S. Supreme Court rules unanimously against school segregation.

1954

A young Ronald E. McNair defies the local librarian and refuses to leave the whites-only library without first checking out books on science and mathematics.

1959

Harvey Washington Banks becomes the first African American to earn a doctorate in astronomy.

1961

Dr. James West patents the modern day microphone (the Electroacoustic Transducer Electret Microphone) with Gerhard Sessler.

1962

George Carruthers is awarded the National Science Foundation Fellowship and begins a long career at the Naval Research Labs.

1964

Thurgood Marshall is appointed as the first African American Supreme Court justice.

1965

Biologist Samuel Nabrit is appointed as the first African American head of the Atomic Energy Commission.

1966

Dr. James Raymond Lawson becomes President of Fisk University.

1967

Astrophysicst Carl Rouse makes the first calculations of the temperature and pressure in the Sun's atmosphere.

1968

Reverend Doctor Martin Luther King Jr. is assassinated.

1968

Harry L. Morrison begins work on MESA: Mathematics, Engineering, and Science Achievement, an initiative to get more minority students involved in STEM education.

1970

Earl D. Shaw patents his spin-flip laser that allows its user to change its strength, making it a very useful tool in all science.

1971

Dr. James Stith becomes the first tenured African American professor of physics at the United States Military Academy at West Point.

1976

The National Society of Black Physicists (NSBP) is established.

1977

Waverly Person becomes the first African American Director of the U.S. Geological Survey.

1977

John Brooks Slaughter is appointed as the first African American Director of the National Science Foundation.

1980

Guion Bluford, Jr., an engineer and NASA astronaut, becomes the first African American to go to space as a member of the crew of the space shuttle *Challenger*.

1983

Physicist George Edward Alcorn wins the NASA Goddard Space Flight Center Inventor of the Year Award for his work on improving imaging x-ray spectrometers.

1984

Seven astronauts, including physicist Ronald McNair, are killed when the space shuttle *Challenger* malfunctions and explodes.

1986

Dr. Walter E. Massey becomes the first African American president of the American Association for the Advancement of Science.

1987

The Edward Bouchet Abdus Salam Institute is founded to facilitate interaction between the African American and African physics communities.

1988

Dr. Walter E. Massey becomes the second African American director of the National Science Foundation.

1990

Warren Washington is among the group of scientists to receive the Nobel Peace Prize for their work on climate change.

2007

President Barack Obama appoints astronaut Charles Bolden as the 12th administrator of NASA, making Bolden the first African American to head the agency.

2009

Theoretical physicist Sylvester James Gates receives the National Medal of Science, the highest honor bestowed by the U.S. government upon scientists, engineers and inventors.

2013

Astrophysicist Neil DeGrasse Tyson begins hosting the popular television show *Cosmos: A Spacetime Odyssey*.

2014

Nicholas Copernicus first states his heliocentric theory of the solar system in *Commentariolus*.

1512

Galileo Galilei uses balls rolling on inclined planes to show that different weights fall with constant acceleration.

1589

Kepler's first two laws of planetary motion are published.

1609

Willebrord Snellius states his law of refraction.

1621

Principia Mathematica is first published by Issac Newton.

1687

Benjamin Franklin shows that lightning is electricity.

1752

Charles Coulomb introduces the inverse-squared law of electrostatics.

1781

Henry Cavendish measures the gravitational constant and determines the mass of the Earth.

1798

Simon Ohm states his law of electrical resistance.

1826

Lord Kelvin proposes the concept of absolute zero.

1848

First public exhibition of a Foucault Pendulum is completed.

1851

James Maxwell first publishes an early form of his equations which describe electromagnetic properties.

1862

Albert Michelson and Edward Morley fail to detect ether drift.

1887

Joseph Thomson discovers the electron.

1897

The American Physical Society (APS) is founded.

1899

The famous equation $E=mc^2$ first appears in a scientific paper written by Albert Einstein.

1905

Niels Bohr introduces his model of the atom.

1913

Albert Einstein wins the Nobel Prize in Physics for his work regarding the photoelectric effect.

1921

The Austrian physicist Erwin Schrödinger publishes his fundamental equation in quantum physics.

1926

American Institute of Physics (AIP) is founded.

1931

Carl D. Anderson wins the Nobel Prize in Physics for his discovery of the positron.

1932

Physicists Leo Szilard, Eugene Wigner, and Albert Einstein write to President Roosevelt encouraging him to develop an atomic bomb before Germany.

1939

The Trinity Test occurs at Alamogordo, New Mexico, ending with the first successful detonation of a nuclear weapon.

1945

The United States drops two atomic bombs on Japan.

1945

The European Council for Nuclear Research (CERN) is founded.

1954

The Soviet Union launches Sputnik I, the first artificial satellite to go into orbit.

1957

Buzz Aldrin and Neil Armstrong become the first people to set foot on the moon.

1969

Voyager I is launched into space with a mission of reaching Jupiter and Saturn and studying the outer planets.

1977

The W and Z Bosons are discovered at CERN.

1983

Scientists first levitate mice using superconductive magnets.

2009

Experiments at CERN confirm the Higgs Boson.

2012

Laura Bassi becomes the first official female physics professor.

1732

Mary Somerville and Caroline Herschel become the first female inductees into the Royal Astronomical Society.

1835

Maria Mitchell becomes the first female member of the American Association for the Advancement of Science.

1848

The first women's rights convention is held in Seneca Falls, NY.

1848

Williamina Fleming begins full-time at the Harvard College Observatory. She served as a supervisor and helped spectrally classify stars.

1881

Margaret Maltby becomes the first American woman to earn a Ph.D from a German university.

1895

Harriet Brooks publishes her findings on radioactivity, including the discovery that one element can change in to another.

1901

Marie Curie becomes the first female to win the Nobel Prize in Physics, an award shared with her husband, Pierre Curie, and Henri Becquerel.

1903

Lise Meitner becomes the first woman to earn a Ph.D. in physics from the University of Vienna.

1905

Hertha Ayrton becomes the first woman to receive the Royal Society's Hughes Medal

1906

Marie Curie becomes the first woman to teach at the Sorbonne, taking over her late husband Pierre's role as head of the physics department.

1906

Marie Curie wins a second Nobel Prize in Chemistry.

1911

Henrietta Swan Leavitt, a computer at Harvard College Observatory, develops a method for measuring the brightness of stars.

1912

Emmy Noether discovers and publishes on the mathematical nature of the conservation laws of physics.

1921

The 19th Amendment to the Constitution is signed into law, granting women the right to vote.

1920

Emmy Noether publishes her famous work on abstract rings and ideal theory.

1921

Katherine Burr Blodgett becomes the first woman to graduate with a Ph.D. from the University of Cambridge.

1926

Annie Jump Cannon receives the Henry Draper Medal from the National Academy of Sciences.

1931

Irene Joliot-Curie, working with Frederic Joliot-Curie, discovers the first radioisotope.

1933

Inge Lehmann, a Danish seismologist, discovers that the earth has a liquid outer core and a solid inner core.

1936

While working in Sweden, Lise Meitner provides the insight which explains nuclear fission.

1938

Maria Goeppert Mayer is hired into her first paid position, despite having earned her Ph.D. in physics 11 years earlier.

1941

Leona Woods Marshall contributes to the construction of the first nuclear reactor in Chicago.

1942

Maria Goeppert Mayer becomes the first female member elected to the National Academy of Sciences for her work in physics.

1956

NASA is founded after Eilene Galloway helps to write the National Aeronautics and Space Act.

1958

The "Mercury 13" are invited to undergo the same physical and psychological test as male astronauts.

1960

Maguerite Perey, discoverer of francium, becomes the first female member of the French Academy of Sciences.

1962

Maria Goeppert Mayer shares the Nobel Prize in Physics with Hans D. Jensen and Eugene Wigner.

1963

Valentina Tereshkova becomes the first woman in space.

1963

Congress passes the Equal Pay Act, making it illegal for employers to pay a woman less than what a man would receive for the same job.

1963

Alinoush Tarian becomes the first female physics professor in Iran.

1963

Graduate student Jocelyn Bell discovers pulsars, a discovery for which her advisor, Antony Hewish, won a Nobel Prize seven years later.

1967

The Equal Employment Opportunity Commission rules it illegal to specify gender in job advertisements.

1968

Mina Rees becomes the first female president of the American Association for the Advancement of Science.

1969

Title IX bans sexual discrimination in schools.

1972

Chien-Shiung Wu becomes the first female president of the American Physical Society.

1975

Eleanor Burbidge becomes the first female president of the American Astronomical Society.

1976

Rosalyn Sussman Yalow shares the Nobel Prize in Physiology or Medicine with Roger Guillemin and Andrew Victor Schally.

1977

The Pregnancy Discrimination Act bars employment discrimination against pregnant women.

1978

Mildred Dresselhaus receives the U.S. National Medal of Science.

1990

Eileen Collins becomes the first female space shuttle commander.

1995

Melissa Eve Bronwen Franklin and her research team discover the top quark.

1995

Jill Tarter becomes director of the Center for SETI (Search for Extra-Terrestrial Intelligence) Research.

1999

Harvard president, Lawrence Summers, says fewer women succeed in math and science because they have less “innate ability.”

2005

Peggy Whitson becomes the first female commander of the International Space Station.

2007

Jocelyn Bell Burnell becomes the first female president of the Institute of Physics.

2008

The National Association of Colored Women is formed.

1896

Katherine G. Johnson begins work in the Guidance and Navigation Department for the National Advisory Committee for Aeronautics.

1953

“Human computer” Katherine Johnson calculates the trajectory for the flight which made Alan Shepard the first American in space.

1959

Willie Hobbs Moore becomes the first African American woman ever to earn a Ph.D. in Physics.

1972

Renowned theoretical physicist Shirley Ann Jackson becomes the first African American woman to receive a Ph.D. from MIT.

1973

Barbara Williams becomes the first African American woman to earn her doctorate in astronomy.

1981

Mae Jemison, a physician and NASA astronaut, becomes the first African American woman to go to space on the space shuttle *Endeavor*.

1992

Science historian Evelyn Hammonds becomes the first African American Dean of Harvard College.

2008

The Apollo 11 mission successfully lands on the moon following “human computer” Katherine Johnson’s trajectory calculations.

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