

# THIS MONTH IN SCIENCE: AUGUST

## 1 August

1774, Oxygen gas discovered by Joseph Priestley, British Presbyterian minister and chemist.

2003, Tejas, India's Light Combat Aircraft made its first successful supersonic flight.



## 2 August

1861, Prafulla Chandra Ray, the Indian chemist was born. He was the first to isolate the chemical mercurous nitrite.

1880, Greenwich Mean Time (GMT) was adopted officially by British Parliament. Greenwich had been the national centre for time since 1675.

1989, Voyager 2's discovery of six more moons of Neptune was confirmed by NASA.

## 3 August

1921, the first crop dusting from an airplane was demonstrated by pilot Lt. John A. Macready.



1994, India's first successful heart transplant on Devi Ram was performed by team of doctors led by Dr. E. Venugopal at AIIMS, New Delhi.

## 4 August

1775, Nicolas Jacq inventor of modern born.



2007, Phoenix Mars Lander Aircraft was launched by NASA.

## 5 August

1864, Giovanni Batista Donati made the first spectroscopic observations of a comet tail (from the small comet, Tempel, 1864 II).



1930, Neil Alden Armstrong, an American astronaut and the first person to walk on the Moon, was born.

## 6 August

1881, Sir Alexander Fleming, the Scottish bacteriologist, who was awarded the 1945 Nobel Prize in Physiology or Medicine (with Ernst Boris Chain and Howard Walter Florey) for the discovery of penicillin and its curative effect in various infectious disease, was born.

1945, the first nuclear bomb was dropped on Hiroshima.



1996, the discovery of potential evidence of a primitive life form on Mars announced by NASA Administrator Daniel Goldin

## 7 August

1925, Monkombu S. Swaminathan, an Indian geneticist and international administrator, who was awarded the first World Food Prize in 1987 for his work in crop genetics and sustainable agricultural development in India, was born. He is renowned for his leading role in India's "Green Revolution".

2007, discovery of TrES-4, the largest known planet in the universe was announced by the astronomers of the Trans Atlantic Exoplanet Survey.

## 8 August

1861, William Bateson, famous English biologist who invented the term "genetics" was born.

1876, Thomas A. Edison received a patent for a stencil duplicator, titled "Improvement in Autographic Printing" (No. 180,857).

1899, Albert T. Marshall of Brockton received a patent for a refrigerator, titled "Automatic Refrigerating Apparatus" (No. 630606)



1948, Svetlana Yevgenyevna Savitskaya, who was the first woman to walk in space (1984), and the first woman to make two trips into space, was born.

## 9 August

1776, Amedeo Avogadro, Italian chemist and physicist, who found that at the same temperature and pressure equal volumes of all perfect gases contain the same number of particles (known as Avogadro's Law), was born.

1910, electric washing machine was patented by Alva J. Fisher.



1973, the USSR launched the Mars 7, on a Proton SL-12/D-1-e booster. The Mars 7 spacecraft was made up of a flyby bus and a descent module intended to study the atmosphere and land on the Martian surface with instruments to study soil composition.

## 10 August

1902, Arne Wilhelm Kaurin Tiselius, who won the Nobel Prize for Chemistry in 1948 "for his work on electrophoresis

and other new methods of separating and detecting colloids and serum proteins", was born.

1913, Wolfgang Pauli, the German physicist, who shared the 1989 Nobel Prize in Physics with Norman Ramsay and Hans Dehmelt "for the development of the ion trap technique", was born.

2003, submarine "Losharik", the world's most silent nuclear submarine was built.



## 11 August

1877, the two moons of the planet Mars, Phobos and Deimos, discovered by American astronomer Asaph Hall.



1926, Sir Aron Klug, the British biochemist, who was awarded the 1982 Nobel Prize for Chemistry "for his development of crystallographic electron microscopy and his structural elucidation of biologically important nucleic acid-protein complexes" was born.

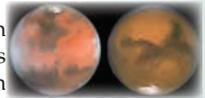
## 12 August

1887, Erwin Schrödinger, who shared the 1933 Nobel Prize for Physics with the British physicist P.A.M. Dirac "for the discovery of new productive forms of atomic theory" was born.

1919, Vikram Sarabhai (famous Indian space scientist) was born. He is considered the father of "India's space programme". He was awarded the Padma Bhushan in 1966. He is known for his primary role in the establishment of ISRO.

## 13 August

1642, the Martian south polar cap was discovered by Christiaan Huygens.



1814, Anders Jones Angstrom, the Swedish physicist, who discovered the presence of hydrogen in the atmosphere of the Sun, was born.

## 14 August

1888, the electric meter was patented by Oliver B. Shallenberger.

1933, Richard R. Ernst, who was awarded the 1991 Nobel Prize for Chemistry "for his contributions to the development of the methodology of high resolution nuclear magnetic resonance (NMR) spectroscopy", was born.



**15 August**

1877, Thomas Edison coined the telephone greeting "Hello." He suggested the use of "Hello" to the president of the Telegraph Company to answer the phone instead of "Ahoy, ahoy" suggested by Alexander Bell

1959, India's first TV station, Doordarshan, was inaugurated.



**16 August**

2003, chemists met in Ottawa to vote and make official a proposed name for the element 110: Darmstadtium, symbol Ds.

**17 August**

1601, Pierre de Fermat, the French mathematician, who is regarded as the founder of the modern theory of numbers, was born.

**18 August**

1868, Pierre Janssen, a French astronomer, discovered Helium in the solar spectrum while observing a solar eclipse in India. It was the first time a chemical was discovered outside the Earth before being found on the Earth.

**19 August**

1856, Gail Borden of Brooklyn, NY, was issued a patent for his process for condensed milk (No. 15,553).

1960, Sputnik 5 was launched into Earth orbit, carrying two dogs named Belka (Squirrel) and Strelka (Little Arrow), along with 40 mice, 2 rats and a variety of plants, beginning a safe round trip into space, after which they became the first living organisms to return from space.



**20 August**

1897, Sir Ronald Ross made a key breakthrough when he discovered malaria parasites while dissecting a mosquito. The day is celebrated as Mosquito Day.

1977, NASA launched Voyager 2 spacecraft, on a Titan-Centaur rocket to explore the outer planets Jupiter, Saturn, Uranus and Neptune, where it also discovered and photographed many previously unknown moons, rings and other features of the planets.



**21 August**

1972, American orbiting astronomy observatory OAO-3 Copernicus was launched.

**22 August**

1962, The Savannah, the world's first nuclear-powered ship, completed her maiden voyage from Yorktown, Va., to Savannah, Ga.



1989, first complete ring around Neptune was discovered

**23 August**

1609, the telescope was demonstrated by Galileo.

1966, the Lunar Orbiter 1 took the first photograph of the Earth from the Moon.

2007, A ten-million year old fossil, "Chororapithecus abyssinicus" was found in Ethiopia.

**24 August**

2006, Pluto was declassified as a planet by the International Astronomical Union (IAU) following a vote at their 10-day General Assembly in Prague.

**25 August**

1900, Sir Hans Adolf Krebs, who shared (with Fritz Lipmann) the 1953 Nobel Prize for Physiology or Medicine "for his discovery of the citric acid cycle" was born.

1916, Frederick Chapman Robbins, who was awarded (with John Enders and Thomas Weller) the 1954 Nobel Prize for Physiology or Medicine for successfully cultivating poliomyelitis virus in tissue cultures" was born.

2003, NASA's Spitzer Space Telescope, the infrared telescope with the largest diameter ever in space was launched.

**26 August**

1743, Antoine-Laurent Lavoisier, who is known as the "father of modern chemistry", was born.

1843, the first U.S. design of a typewriter that successfully typed was issued a patent to Charles Thurber of Norwich, Conn. (No. 3,228) as a "machine for printing by hand by pressing upon keys which contain the type, called 'Thurber's Patent Printer.'"

1909, an almost perfectly preserved "Cro-Magnon man skeleton" was discovered by Swiss paleontologist Otto Hauser.



**27 August**

1875, the element gallium (Atomic Number 31; Symbol 'Ga') was discovered by P.E. Lecoq de Boisbaudran.

1939, Sir Frank Whittle and Hans J.P. von Ohain invented a craft that became the first jet-powered airplane to fly.

1962, the Mariner 2 space probe, the first American probe was launched to flyby Venus.

2003, the world's biggest battery was connected to provide emergency power to Fairbanks, Alaska's second-largest city.

**28 August**

1789, Sir William Herschel discovered Saturn's moon "Enceladus".

1883, the first controlled flight in a glider was flown by John Joseph.

1919, Sir Godfrey Newbold Hounsfield, who was awarded the 1979 Nobel Prize for Physiology or Medicine (with Allan Cormack) "for creation of computerised axial tomography (CAT) scanners" was born.



**29 August**

1842, the design patent, a new form of patent was authorized by Act of Congress. The first U.S. design patent was issued for typefaces and borders to George Bruce of New York City on 9 Nov 1842.



1949, the Soviet Union conducted its first nuclear test, code-named 'RDS-1', at the Semipalatinsk test site in modern-day Kazakhstan.

1947, the discovery of plutonium fission was announced by USA, suitable for nuclear-power generation.

1982, the element no. 109, Meitnerium, with the symbol Mt was discovered by Peter Armbruster and Gottfried.

**30 August**

1831, Michael Faraday demonstrated the first electrical transformer.

1979, Comet Howard-Koomen-Michels (SOLWIND I) collided with the Sun, the first recorded comet to collide with Sun and the first discovered

**31 August**

1880, Thomas A. Edison was granted a patent for his invention of an "Electro-Chemical Receiving-Telephone" (No. 231,704).

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