History of Physics Aristotle to Newton

Some Significant Dates in the History of Physics

500 B.C. Pythagoreans, Earth is a sphere

320 B.C. Aristotle describes motion in terms of natural tendencies.

250 B.C. Archimedes discovers the principle of buoyancy.

48 B.C. Julius Cesar accidentally burned part of the library of Alexandria during the roman occupation

150 A.D. Ptolemy refines the earth-centered system of the world.

642 A.D. The library of Alexandria is completely destroyed by the Muslim occupation of the city.

1543 Copernicus publishes his sun-centered system of the world.

1575-1596 Brahe measures precise positions of the planets in the sky.

1609 Galileo first uses a telescope as an astronomical tool.

1609/1619 Kepler publishes three laws of planetary motion.

1634 Galileo advances understanding of accelerated motion.

1661 Boyle relates pressure and volume of gases at constant temperature.

1676 Roemer demonstrates that light has finite speed.

1678 Huygens develops a wave theory of light.

1687 Newton presents the theory of mechanics in his *Principia.*

1738 Bernoulli explains the behavior of gases in terms of molecular motions.

1747 Franklin suggests the conservation of electrical "fire" (charge).

1780 Galvani discovers "animal electricity."

1785 Coulomb precisely determines the law of electric force.

C. 1795 Cavendish measures the gravitational constant G.

1798 Rumford argues that heat is a form of motion.

1800 Volta invents the battery.

1802 Young uses wave theory to account for interference.

1811 Avogadro suggests that at equal temperature and pressure, all gases have equal number of molecules per unit volume.

1815-1820 Young and others provide evidence for the wave nature of light.

1820 Oersted discovers the magnetic effect of an electric current.

1820 Ampere establishes the law of force between current-carrying wires.

1821 Fraunhofer invents the diffraction grating.

1824 Carnot states that heat cannot be transformed wholly to work.

1831 Faraday and Henry discover electromagnetic induction.

1842-1 843 Mayer and Joule suggest a general law of energy conservation.

1846 Adams and Leverrier predict the new planet Neptune.

1865 Maxwell gives the electromagnetic theory of light.

1869 Mendeleev organizes the elements into a periodic table.

1877 Boltzmann relates entropy to probability.

1885 Balmer finds numerical regularity in the spectrum of hydrogen.

1887 Michelson and Morley fail to detect the ether.

1888 Hertz generates and detects radio waves.

1895 Roentgen discovers X rays.

1896 Bequerel discovers radioactivity.

1897 Thomson identifies cathode rays as negative corpuscles (electrons).

1900 Planck introduces the quantum idea.

1905 Einstein introduces the light corpuscle (photon) concept.

1905 Einstein advances the special theory of relativity.

1911 Rutherford reveals the nuclear atom.

1913 Bohr gives a quantum theory of the hydrogen atom.

1915 Einstein advances the general theory of relativity.

1923 Compton's experiments confirm the existence of the photon.

1924 de Broglie advances the wave theory of matter.

1925 Goudsmit and Uhienbeck establish the spin of the electron.

1925 Pauli states the exclusion principle.

1925 Davisson and Germer and Thomson verify the wave nature of electrons.

1926 SchrOdinger develops the wave theory of quantum mechanics.
1927 Heisenberg proposes the uncertainty principle.
1928 Dirac blends relativity and quantum mechanics in a theory of the electron.
1929 Hubble discovers the expanding universe.
1932 Anderson discovers antimatter in the form of the positron.
1932 Chadwick discovers the neutron.
1932 Heisenberg gives the neutron-proton explanation of nuclear structure.
1934 Fermi proposes a theory of the annihilation and creation of matter.
1938 Meitner and Frisch interpret results of Hahn and Strassmann as nuclear fission.
1939 Bohr and Wheeler give a detailed theory of nuclear fission.
1942 Fermi builds and operates the first nuclear reactor.
1945 Oppenheimer's Los Alamos team creates a nuclear explosion.
1947 Bardeen and Brattain develop the transistor.
1956 Reines and Cowan identify the antineutrino.
1957 Feynman and Gell-Mann account for all weak interactions with a "lefthanded" neutrino.
1960 Maiman invents the laser.
1965 Penzias and Wilson discover background radiation in the universe left over from the Big Bang.
1967 Bell and Hewish discover pulsars, which are neutron stars.
1968 Wheeler names black holes.
1969 Gell-Mann suggests quarks as the building blocks of nucleons.
1969 First manned lunar landing.
1980 Rubin postulates that the universe contains much "dark matter."
1994 Princeton Plasma Physics Laboratory achieves more than 10 MW of fusion power.
1996 Discovery of evidence for possible life in Martian meteorite.

References:

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