Timeline of Space Exploration

Primarily from http://www.space.com/4422-timeline-50-years-spaceflight.html and http://www.archives.gov/research/alic/reference/space-timeline.html#time

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| **Sometime in the 11th century** | China combined sulfur, charcoal, and saltpeter (potassium nitrate) to make gunpowder, the first fuel used to propel early rockets in Chinese warfare. (“rocket” means fire arrow) |
| **July 4, 1054** | Chinese astronomers observed the supernova in Taurus that formed the [Crab Nebula](http://www.space.com/16989-crab-nebula-m1.html). |
| March 16, 1926 | Robert Goddard (the Father of Modern Rocketry) successfully launched the first successful liquid-fueled rocket |
| February 18, 1930 | Clyde Tombaugh discovered Pluto |
| **October 14, 1947** | American test pilot Chuck Yeager broke the sound barrier. |
| October 4, 1957 | The Soviet Union launched *Sputnik 1*, the first satellite, into space, which started the Space Race between the Soviet Union and the United States. |
| November 3, 1957 | The Soviet Union launched *Sputnik 2* with a dog named Laika, the first living passenger, on board. |
| January 31, 1958 | The United States launched *Explorer 1*, the first satellite with an onboard telemetry system so it could return data from space. |
| October 1, 1958 | NASA was founded; six days later, NASA Administrator T. Keith Glennan publicly announced that NASA was developing a manned spaceflight program. |
| January 2, 1959 | The USSR launched *Luna 1*, the first artificial object to leave Earth’s orbit. |
| May 28, 1959 | NASA launched the first primates, Able and Baker, in space. |
| August 7, 1959 | NASA launched *Explorer 6*, the first satellite to take photographs of the Earth from space. |
| September 12, 1959 | The USSR launched *Luna 2*, which was deliberately crashed into the moon. It was, however, the first man-made object to reach the moon. |
| April 12, **1961** | **Yuri Gagarin, Russian cosmonaut, became the first man in space.** |
| May 5, **1961** | **Alan Shepard became the first American in space.** |
| July 10, **1962** | **The USA launched *Telstar 1*, which allowed television signals to cross the Atlantic Ocean.** |
| June 16, 1963 | Valentina Nikolayeva Tereshkova became the first woman in space. |
| March 18, 1965 | Russian cosmonaut Alexei Leonov became the first man to walk in space. |
| July 14, 1965 | *Mariner 4* became the first spacecraft to transmit pictures of Mars. |
| April 3, 1966 | The Soviet’s *Luna 10* became the first spacecraft to orbit the moon. |
| October 18, 1967 | The Soviet’s probe *Venera 4* collected data about the atmosphere of Venus. |
| December 21, 1968 | *Apollo 8* was launched; her crewmembers became the first men to orbit the moon. |
| July 20, 1969 | Neil Armstrong and Buzz Aldrin became the first men to step foot on the moon. |
| December 15, 1970 | The Soviet *Venera 7* became the first probe to land on Venus. |
| **November 13, 1971** | *Mariner 9* became the first spacecraft to orbit another world (Mars) and gave us the first complete map of that planet's surface. |
| **March 3, 1972** | [*Pioneer 10*](http://www.space.com/17651-pioneer-10.html) was launched to become the first spacecraft to leave the solar system. |
| **March 29, 1974** | *Mariner 10* became the first spacecraft to fly by Mercury. |
| **July 17 1975** | Soviet *Soyuz-19* and American *Apollo 18* dock. |
| **July 20, 1976** | The U.S. *Viking 1* successfully landed on Mars. |
| September, 1976 | The American probe *Viking 2* discovered water frost on the Martian surface. |
| August and September, 1977 | *Voyagers 1 and 2 were* launched to study the outer solar system. Voyager 2 was launched before *Voyager 1, but Voyager 1* was on a faster trajectory. |
| March and August, 1979 | *Voyagers 1 and 2* began transmitting images of Jupiter and her moons. |
| **September 1, 1979** | [*Pioneer 11*](http://www.space.com/17785-pioneer-11.html) became the first spacecraft to fly past Saturn and to transmit images. |
| J**une 18, 1983** | [Sally Ride](http://www.space.com/16756-sally-ride-biography.html) became the first American woman in space. |
| August 30, 1983 | Guion S. Bluford became the first African American in space. |
| January 24, 1986 | *Voyager 2* began transmitting images from Uranus. |
| August, 1989 | *Voyager 2* began transmitting images from Neptune. |
| **April 25, 1990** | The space shuttle *Discovery* put the *Hubble Space Telescope* into Earth’s orbit. |
| September 12, 1992 | Mae Jemison became the first African-American woman in space. |
| July 4, 1997 | The Mars *Pathfinder* arrived on Mars and began transmitting images. |
| **January 4, 2004** | The first Mars exploration rover, *Spirit*, landed on Mars. Its twin, *Opportunity*, landed January 25. |
| July 1, 2004 | The *Cassini* spacecraft sent back photographs of Saturn’s rings. |
| **January 19, 2006** | *New Horizons*, NASA's first mission to Pluto and its moons, was launched. |
| **September 27, 2007** | *Dawn*, the first ion-powered probe to visit two celestial bodies in one trip, [launched on an eight-year mission](http://www.space.com/4403-dawn-spacecraft-begins-trek-asteroid-belt.html) to the asteroid Vesta and dwarf planet Ceres, the two largest space rocks in the solar system. |
| January 14, 2008 | The NASA space probe *Messenger* traveled 124 miles above Mercury. |
| May 25, 2008 | NASA’s *Phoenix Mars Lander* sent back images of Mars, including evidence of chunks of ice. |
| March 6, 2009 | The NASA spacecraft *Kepler* was launched to search for planets outside our solar system. . |
| November 13, 2009 | NASA scientists announced the discovery of a "significant amount" of ice in a crater near the moon’s south pole. |
| December 8, 2010 | SpaceX, a private company, launched a spacecraft into orbit and returned it to earth safely. It was the first non-government organization to accomplish this. |
| July 16, 2011 | NASA's *Dawn* became the first man-made spacecraft to orbit an asteroid. |
| August, 2012 | NASA’s *Voyager 1* probe, launched in 1977, entered interstellar space. |
| August 6, 2012 | NASA's *Curiosity* rover successfully landed on Mars. It was the size of a car and had lots of new instruments for many different kinds of experiments. |
| August 29, 2012 | NASA scientists reported the discovery of a solar system approximately 5,000 light years away; they named the solar system Kepler 47 |
| January 25, 2014 | Opportunity continues to drive on Mars 10 years after landing |
| July 14, 2015 | New Horizons flies by Pluto and its moons |